

Bibliography

- Abbate, Jeremy/May, Mike/Friedman, Yali, Scientific American Worldview: A Global Biotechnology Perspective (2016), available at: https://static.scientificamerican.com/wv/assets/2016_SciAmWorldView.pdf (last accessed 28 May 2022)
- Acquaah, George, Conventional Plant Breeding Principles and Techniques, in: Jameel M. Al-Khayri/Mohan Jain/Dennis V. Johnson (eds.), *Advances in Plant Breeding Strategies. Breeding, Biotechnology and Molecular Tools* (Springer, Cham 2015), 115–158
- African Centre for Biodiversity/GeneWatch UK/Third World Network, GM Mosquitoes in Burkina Faso: A Briefing for the Parties to the Cartagena Protocol on Biosafety (2018), available at: http://www.genewatch.org/uploads/f03c6d66a9b354535738483c1c3d49e4/GM_mosquito_report_WEB.pdf (last accessed 28 May 2022)
- Agapito-Tenfen, Sarah Z./Wikmark, Odd-Gunnar, Current Status of Emerging Technologies for Plant Breeding: Biosafety and Knowledge Gaps of Site Directed Nucleases and Oligonucleotide-Directed Mutagenesis, Biosafety Report 02/2015 (2015), available at: http://genok.no/wp-content/uploads/2015/06/250615_Emerging_technologies_final.pdf (last accessed 28 May 2022)
- Ago, Roberto, Fourth Report on State Responsibility, YBILC 1972, Vol. II, 126 (1972)
- Ahloowalia, B. S./Maluszynski, M./Nichterlein, K., Global Impact of Mutation-Derived Varieties, 135 (2004) *Euphytica* 187–204
- Akbari, Omar S./Bellen, Hugo J./Bir, Ethan et al., Safeguarding Gene Drive Experiments in the Laboratory: Multiple Strategies Are Needed to Ensure Safe Gene Drive Experiments, 349 (2015) *Science* 927–929
- Akbari, Omar S./Chen, Chun-Hong/Marshall, John M. et al., Novel Synthetic Medea Selfish Genetic Elements Drive Population Replacement in *Drosophila*; a Theoretical Exploration of Medea-Dependent Population Suppression, 3 (2014) *ACS Synthetic Biology* 915–928
- Akbari, Omar S./Matzen, Kelly D./Marshall, John M. et al., A Synthetic Gene Drive System for Local, Reversible Modification and Suppression of Insect Populations, 23 (2013) *Current Biology* 671–677
- Albers, Bruce/Johnson, Alexander/Lewis, Julian et al., *Molecular Biology of the Cell* (6th ed., Garland Science, New York 2015)
- Alcalay, Yehonatan/Fuchs, Silke/Galizi, Roberto et al., The Potential for a Released Autosomal X-Shredder Becoming a Driving-Y Chromosome and Invasively Suppressing Wild Populations of Malaria Mosquitoes, 9 (2021) *Front. Bioeng. & Biotechnol.* 752253
- Alphey, Luke S./Crisanti, Andrea/Randazzo, Filippo Fil/Akbari, Omar S., Opinion: Standardizing the Definition of Gene Drive, 117 (2020) *PNAS* 30864–30867

- Altwickler-Hámori, Szilvia/Altwickler, Tilmann/Peters, Anne*, Measuring Violations of Human Rights: An Empirical Analysis of Awards in Respect of Non-Pecuniary Damage Under the European Convention on Human Rights, 76 (2016) *ZaöRV* 1–51
- Alvarez-Morales, Reynaldo Ariel*, A Scientific Perspective on the Supplementary Protocol, in: Akiho Shibata (ed.), *International Liability Regime for Biodiversity Damage*. The Nagoya-Kuala Lumpur Supplementary Protocol (Taylor & Francis, London 2014), 105–110
- Amerasinghe, Chittharanjan Felix*, *Local Remedies in International Law* (2nd ed., Cambridge University Press, Cambridge 2004)
- American Law Institute (ALI)*, *Restatement of the Law Third: Foreign Relations of the United States*, Volume 2 (American Law Inst. Publ. St. Paul, Minnesota 1987)
- Andersen, Kristian G./Rambaut, Andrew/Lipkin, W. Ian/Holmes, Edward C./Garry, Robert F.*, The Proximal Origin of SARS-CoV-2, 26 (2020) *Nature Medicine* 450–452
- Andolfo, Giuseppe/Iovieno, Paolo/Frusciante, Luigi/Ercolano, Maria R.*, Genome-Editing Technologies for Enhancing Plant Disease Resistance, 7 (2016) *Front. Plant Sci.* 1813
- Angulo, Elena/Bárcena, Juan*, Towards a Unique and Transmissible Vaccine Against Myxomatosis and Rabbit Haemorrhagic Disease for Rabbit Populations, 34 (2007) *Wildlife Research* 567
- Angulo, Elena/Cooke, B.*, First Synthesize New Viruses Then Regulate Their Release? The Case of the Wild Rabbit, 11 (2002) *Molecular Ecology* 2703–2709
- Angulo, Elena/Gilna, Ben*, When Biotech Crosses Borders, 26 (2008) *Nature Biotech.* 277–282
- Antunes, Nuno Sérgio Marques*, Acquiescence, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Araki, Motoko/Nojima, Kumie/Isbii, Tetsuya*, Caution Required for Handling Genome Editing Technology, 32 (2014) *Trends in Biotechnology* 234–237
- Arango-Ruiz, Gaetano*, Second Report on State Responsibility, YBILC 1989 Vol. II, Pt. 1, 1
- Ardlie, K. G.*, Putting the Brake on Drive: Meiotic Drive of t Haplotypes in Natural Populations of Mice, 14 (1998) *Trends in Genetics* 189–193
- Ascencio, Alfonso*, The Transboundary Movement of Living Modified Organisms: Issues Relating to Liability and Compensation, 6 (1997) *RECIEL* 293–303
- Baden, Lindsey R./El Sahly, Hana M./Essink, Brandon et al.*, Efficacy and Safety of the mRNA-1273 SARS-CoV-2 Vaccine, 384 (2021) *N. Engl. J. Med.* 403–416
- Bail, Christoph/Decaestecker, Jean Paul/Jørgensen, Matthias*, European Union, in: Christoph Bail/Robert Falkner/Helen Marquard (eds.), *The Cartagena Protocol on Biosafety. Reconciling Trade in Biotechnology with Environment and Development?* (Earthscan, London 2002), 166–185

- Baltimore, David/Berg, Paul/Botchan, Michael et al., *Biotechnology. A Prudent Path Forward for Genomic Engineering and Germline Gene Modification*, 348 (2015) *Science* 36–38
- Banaszewska, Dorota Marianna, *Lex Specialis*, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Banda, Maria L., *Regime Congruence: Rethinking the Scope of State Responsibility for Transboundary Environmental Harm*, 103 (2019) *Minnesota Law Review* 1879–1690
- Barboza, Julio, *The Environment, Risk and Liability in International Law* (Martinus Nijhoff, Leiden/Boston 2011)
- Barrangou, Rodolphe, *CRISPR Craziness: A Response to the EU Court Ruling*, 1 (2018) *The CRISPR Journal* 251–252
- Barrangou, Rodolphe/Doudna, Jennifer A., *Applications of CRISPR Technologies in Research and Beyond*, 34 (2016) *Nature Biotech.* 933
- Barrangou, Rodolphe/Fremaux, Christophe/Deveau, Hélène et al., *CRISPR Provides Acquired Resistance Against Viruses in Prokaryotes*, 315 (2007) *Science* 1709–1712
- Bartkowski, Bartosz, *Economic Valuation of Biodiversity: An Interdisciplinary Conceptual Perspective* (Routledge, London/New York 2017)
- Bearden, David M., *Comprehensive Environmental Response, Compensation, and Liability Act: A Summary of Superfund Cleanup Authorities and Related Provisions of the Act* (2012), available at: <https://fas.org/sgp/crs/misc/R41039.pdf> (last accessed 28 May 2022)
- Beck, Felix, *All About that Risk? A (Re-)Assessment of the CJEU's Reasoning in the "Genome Editing" Case*, 17 (2019) *EurUP* 246–255
- The International Regime on Liability for Damage Arising from the Use of Genome Editing and Gene Drives in Agriculture: Current Shortcomings and Pathways for Future Improvement, in: Christian Dürnberger/Sebastian Pfeilmeier/Stephan Schleissing (eds.), *Genome Editing in Agriculture. Between Precaution and Responsibility* (Nomos, Baden-Baden 2019), 135–151
- Becker-Weinberg, Vasco, *Article 229 UNCLOS*, in: Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea: A Commentary* (C.H.Beck/Hart/Nomos, Munich et al. 2017)
- Bederman, David J./Kesar, Soniya P., *Antarctic Environmental Liability: The Stockholm Annex and Beyond*, 19 (2005) *Emory International Law Review* 1383–1405
- Beeman, R. W./Friesen, K. S./Denell, R. E., *Maternal-Effect Selfish Genes in Flour Beetles*, 256 (1992) *Science* 89–92
- Beisel, Chase L./Gomaa, Ahmed A./Barrangou, Rodolphe, *A CRISPR Design for Next-Generation Antimicrobials*, 15 (2014) *Genome Biology* 516

- Bendel, Justine/Harrison, James*, Determining the Legal Nature and Content of EIAs in International Environmental Law: What Does the ICJ Decision in the Joined Costa Rica v Nicaragua/Nicaragua v Costa Rica Cases Tell Us?, 42 (2017) QIL 13–21
- Benzing, Markus*, Das Beweisrecht vor internationalen Gerichten und Schiedsgerichten in zwischenstaatlichen Streitigkeiten (Springer, Berlin/Heidelberg 2010)
- Bergkamp, Lucas*, Liability and Environment: Private and Public Law Aspects of Civil Liability for Environmental Harm in an International Context (Kluwer Law International, The Hague 2001)
- Liability and Redress: Existing Legal Solutions for Traditional Damage, in: CropLife International (ed.), Compilation of Expert Papers Concerning Liability and Redress and Living Modified Organisms. A Contribution to the Article 27 Process Under the Cartagena Protocol on Biosafety (2004), 21–29
- Bernasconi-Osterwalder, Nathalie*, The Cartagena Protocol on Biosafety: A Multilateral Approach to Regulate GMOs, in: Edith Brown Weiss/John H. Jackson/Nathalie Bernasconi-Osterwalder (eds.), Reconciling Environment and Trade (2nd ed., Martinus Nijhoff, Leiden 2008), 645–677
- Beyrer, Ulrich/Marauhn, Thilo*, International Environmental Law (Hart/Beck/Nomos, Oxford et al. 2011)
- Bianchi, Andrea*, Environmental Harm Resulting from the Use of Nuclear Power Sources in Outer Space: Some Remarks on State Responsibility and Liability, in: Francesco Francioni/Tullio Scovazzi (eds.), International Responsibility for Environmental Harm (Graham & Trotman, London 1991), 231–272
- Bibikova, Marina/Golic, Mary/Golic, Kent G./Carroll, Dana*, Targeted Chromosomal Cleavage and Mutagenesis in Drosophila Using Zinc-Finger Nucleases, 161 (2002) Genetics 1169–1175
- Bier, Ethan*, Gene Drives Gaining Speed, 23 (2022) Nature Rev. Genet. 5–22
- Bikard, David/Euler, Chad W./Jiang, Wenyan et al.*, Exploiting CRISPR-Cas Nucleases to Produce Sequence-Specific Antimicrobials, 32 (2014) Nature Biotech. 1146–1150
- Bilder, Richard B.*, The Settlement of Disputes in the Field of the International Law of the Environment, 144 (1975) RdC 140–239
- Birnie, Patricia W./Boyle, Alan E./Redgwell, Catherine*, International Law and the Environment (3rd ed., Oxford University Press, Oxford 2009)
- Boch, Jens/Scholz, Heidi/Schornack, Sebastian et al.*, Breaking the Code of DNA Binding Specificity of TAL-Type III Effectors, 326 (2009) Science 1509–1512
- Böckenförde, Markus*, The Introduction of Alien or New Species into the Marine Environment: A Challenge for Standard Setting and Enforcement, in: Peter Ehlers/Elisabeth Mann-Borgese/Rüdiger Wolfrum (eds.), Marine Issues. From a Scientific, Political and Legal Perspective (Kluwer Law International, The Hague 2002), 241–263

- Biological Safety, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Genetically Modified Organisms, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Bodansky, Daniel*, Deconstructing the Precautionary Principle, in: David D. Caron/Harry N. Scheiber (eds.), *Bringing New Law to Ocean Waters* (Law of the Sea Institute University of California, Berkeley et al. 2010), 381–391
- Thirty Years Later: Top Ten Developments in International Environmental Law (2020) *Yearbook of International Environmental Law* 1–19
- Bodansky, Daniel/Crook, John R.*, Symposium: The ILC’s State Responsibility Articles: Introduction and Overview, 96 (2002) *AJIL* 773–791
- Böhringer, Ayse-Martina*, *Die Kooperationsvereinbarungen der Sekretariate multilateraler Umweltschützabkommen* (Mohr Siebeck, Tübingen 2014)
- Bolotin, Alexander/Quinquis, Benoit/Sorokin, Alexei/Ehrlich, S. Dusko*, Clustered Regularly Interspaced Short Palindrome Repeats (CRISPRs) Have Spacers of Extrachromosomal Origin, 151 (2005) *Microbiology* 2551–2561
- Boon, Kristen E.*, Are Control Tests Fit for the Future? The Slippage Problem in Attribution Doctrines, 15 (2015) *Melb. J. Int’l L.* 1–48
- Boos-Hersberger, Astrid*, Transboundary Water Pollution and State Responsibility: The Sandoz Spill, 4 (1997) *Annual Survey of International & Comparative Law* 103–131
- Boothby, William H.*, *Weapons and the Law of Armed Conflict* (2nd ed., Oxford University Press, Oxford 2016)
- Borchard, Edwin M.*, Theoretical Aspects of the International Responsibility of States, 1 (1929) *ZaöRV* 223–250
- Bordin, Fernando Lusa*, Reflections of Customary International Law: The Authority of Codification Conventions and ILC Draft Articles in International Law, 63 (2014) *ICLQ* 535–567
- Boyce Thompson Institute*, BTI Receives DARPA “Insect Allies” Award to Develop Viruses and Insects for Maize Improvement (27 July 2017), available at: <https://btiscience.org/explore-bti/news/post/bti-receives-darpa-insect-allies-award-to-develop-viruses-and-insects-for-maize-improvement/> (last accessed 28 May 2022)
- Boyle, Alan E.*, State Responsibility and International Liability for Injurious Consequences of Acts Not Prohibited by International Law: A Necessary Distinction?, 39 (1990) *ICLQ* 1–26
- The Role of International Human Rights Law in the Protection of the Environment, in: Alan E. Boyle/Michael Anderson (eds.), *Human Rights Approaches to Environmental Protection* (Clarendon Press, Oxford 1996), 43–69

- Reparation for Environmental Damage in International Law: Some Preliminary Problems, in: Michael Bowman/Alan E. Boyle (eds.), *Environmental Damage in International and Comparative Law. Problems of Definition and Valuation* (Oxford University Press, Oxford/New York 2002), 17–26
- Globalising Environmental Liability: The Interplay of National and International Law, 17 (2005) *J. Env'tl L.* 3–26
- Liability for Injurious Consequences of Acts Not Prohibited by International Law, in: James Crawford/Alain Pellet/Simon Olleson (eds.), *The Law of International Responsibility* (Oxford University Press, Oxford 2010), 95–104
- Boyle, Alan E./Redgwell, Catherine, Birnie, Boyle, and Redgwell's *International Law and the Environment* (4th ed., Oxford University Press, Oxford/New York, NY 2021)
- Boyle, Kevin J., Contingent Valuation in Practice, in: Patricia A. Champ/Kevin J. Boyle/Thomas C. Brown (eds.), *A Primer on Nonmarket Valuation* (2nd ed., Springer Nature, Dordrecht 2017), 83–122
- Brand, Ronald A., Forum Non Conveniens, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Brans, Edward H. P., *Liability for Damage to Public Natural Resources: Standing, Damage and Damage Assessment* (Kluwer Law International, The Hague 2001)
- Brans, Edward H. P./Dongelmans, Dorith H., The Supplementary Protocol and the EU Environmental Liability Directive, in: Akiho Shibata (ed.), *International Liability Regime for Biodiversity Damage. The Nagoya-Kuala Lumpur Supplementary Protocol* (Taylor & Francis, London 2014), 180–200
- Bratspies, Rebecca M., State Responsibility for Human-Induced Environmental Disasters, 55 (2012) *German YBIL* 175–213
- Bratspies, Rebecca M./Miller, Russell A. (eds.), *Transboundary Harm in International Law: Lessons from the Trail Smelter Arbitration* (Cambridge University Press, Cambridge 2006)
- Brenner, D. M./Baltensperger, D. D. et al., Genetic Resources and Breeding of *Amaranthus*, in: Jules Janick (ed.), *Plant Breeding Reviews*, Volume 19 (Wiley, New York, N.Y 2000), 227–285
- Brent, Kerry Anne, The Certain Activities Case: What Implications for the No-Harm Rule?, 20 (2017) *Asia Pac. JEL* 28–56
- Brinegar, Katelyn/K Yetisen, Ali/Choi, Sun et al., The Commercialization of Genome-Editing Technologies, 37 (2017) *Critical Reviews in Biotechnology* 924–932
- Broberg, Morten, A Critical Appraisal of the World Health Organization's International Health Regulations (2005) In Times of Pandemic: It Is Time for Revision, 11 (2020) *European Journal of Risk Regulation* 202–209
- Brown, Paul, Insurers Refuse to Cover GM Farmers, *The Guardian*, 08 October 2003, available at: <https://www.theguardian.com/science/2003/oct/08/gm.sciencenews> (last accessed 28 May 2022)
- Brown Weiss, Edith, Invoking State Responsibility in the Twenty-First Century, 96 (2002) *AJIL* 798–816

- Brunnée, Jutta*, COPing with Consent: Law-Making Under Multilateral Environmental Agreements, 15 (2002) *Leiden J. Int'l L.* 1–52
- Of Sense and Sensibility: Reflections on International Liability Regimes as Tools for Environmental Protection, 53 (2004) *ICLQ* 351–368
- Enforcement Mechanisms in International Law and International Environmental Law, in: Ulrich Beyerlin/Peter-Tobias Stoll/Rüdiger Wolfrum (eds.), *Ensuring Compliance with Multilateral Environmental Agreements. A Dialogue Between Practitioners and Academia* (Martinus Nijhoff, Leiden 2006), 1–23
- International Environmental Law and Community Interests: Procedural Aspects, in: Eyal Benvenisti/Georg Nolte/Keren Yalin-Mor (eds.), *Community Interests Across International Law* (Oxford University Press, Oxford 2018), 151–175
- Buchman, Anna/Marshall, John M./Ostrovski, Dennis/Yang, Ting/Akbari, Omar S.*, Synthetically Engineered Medea Gene Drive System in the Worldwide Crop Pest *Drosophila Suzukii* (2018) *PNAS* 201713139
- Buchthal, Joanna/Evans, Sam Weiss/Lunshof, Jeantine/Telford, Sam R./Esvelt, Kevin M.*, Mice Against Ticks: An Experimental Community-Guided Effort to Prevent Tick-Borne Disease by Altering the Shared Environment, 374 (2019) *Philos. Trans. R. Soc. B* 20180105
- Bull, J. J.*, Evolutionary Decay and the Prospects for Long-Term Disease Intervention Using Engineered Insect Vectors, 2015 (2015) *Evolution, Medicine, and Public Health* 152–166
- Bull, James J./Smithson, Mark W./Nuismer, Scott L.*, Transmissible Viral Vaccines, 26 (2018) *Trends in Microbiology* 6–15
- Burt, Austin*, Site-Specific Selfish Genes as Tools for the Control and Genetic Engineering of Natural Populations, 270 (2003) *Proc. R. Soc. B* 921–928
- Burt, Austin/Coulibaly, Mamadou/Crisanti, Andrea/Diabate, Abdoulaye/Kayondo, Jonathan K.*, Gene Drive to Reduce Malaria Transmission in Sub-Saharan Africa, 5 (2018) *Journal of Responsible Innovation* S80
- Burt, Austin/Crisanti, Andrea*, Gene Drive: Evolved and Synthetic, 13 (2018) *ACS Chemical Biology* 343–346
- Burt, Austin/Koufopanou, Vassiliki*, Homing Endonuclease Genes: The Rise and Fall and Rise Again of a Selfish Element, 14 (2004) *Current Opinion in Genetics & Development* 609–615
- Burt, Austin/Trivers, Robert*, *Genes in Conflict: The Biology of Selfish Genetic Elements* (Belknap Press of Harvard Univ. Press, Cambridge, Mass. 2006)
- Callaway, Ewen*, ‘Gene Drive’ Moratorium Shot Down at UN Biodiversity Meeting, *Nature News* (21 December 2016), available at: <http://www.nature.com/news/gene-drive-moratorium-shot-down-at-un-biodiversity-meeting-1.21216> (last accessed 28 May 2022)
- UN Treaty Agrees to Limit Gene Drives but Rejects a Moratorium, *Nature News*, 29 November 2018, available at: <https://www.nature.com/articles/d41586-018-07600-w> (last accessed 28 May 2022)

- The Mosquito Strategy that Could Eliminate Dengue, *Nature News*, 20 August 2020, available at: <https://www.nature.com/articles/d41586-020-02492-1> (last accessed 28 May 2022)
- Callebaut, Sam Odo*, New Developments in Modern Biotechnology: A Survey and Analysis of the Regulatory Status of Plants Produced Through New Breeding Techniques, Master Thesis (2015), available at: http://lib.ugent.be/fulltxt/RUG01/002/213/647/RUG01-002213647_2015_0001_AC.pdf (last accessed 28 May 2022)
- Cammack, Richard/Attwood, Teresa K. et al. (eds.)*, Oxford Dictionary of Biochemistry and Molecular Biology (2nd ed., Oxford University Press, Oxford 2006)
- Campbell, Karl J./Beek, Joe/Eason, Charles T. et al.*, The Next Generation of Rodent Eradications: Innovative Technologies and Tools to Improve Species Specificity and Increase Their Feasibility on Islands, 185 (2015) *Biological Conservation* 47–58
- Cançado Trindade, Antônio Augusto*, Principle 15, in: Jorge E. Viñuales (ed.), *The Rio Declaration on Environment and Development: A Commentary* (Oxford University Press, Oxford 2015), 403–428
- Carlson, Daniel F./Lancto, Cheryl A./Zang, Bin et al.*, Production of Hornless Dairy Cattle from Genome-Edited Cell Lines, 34 (2016) *Nature Biotech.* 479–481
- Carneiro Dutra, Heverton Leandro/Neves Rocha, Marcelo/Stehling Dias, Fernando et al.*, Wolbachia Blocks Currently Circulating Zika Virus Isolates in Brazilian Aedes Aegypti Mosquitoes, 19 (2016) *Cell Host & Microbe* 771–774
- Caron, David D.*, The ILC Articles on State Responsibility: The Paradoxical Relationship Between Form and Authority, 96 (2002) *AJIL* 857–873
- Carrato, J. Thomas/Barkett, John/Goldberg, Phil*, The Industry's Compact and Its Implications for the Supplementary Protocol, in: Akiho Shibata (ed.), *International Liability Regime for Biodiversity Damage. The Nagoya-Kuala Lumpur Supplementary Protocol* (Taylor & Francis, London 2014), 218–239
- Carroll, Dana*, Genome Engineering with Zinc-Finger Nucleases, 188 (2011) *Genetics* 773–782
- Cassese, Antonio*, The Nicaragua and Tadic Tests Revisited in Light of the ICJ Judgment on Genocide in Bosnia, 18 (2007) *EJIL* 649–668
- Champer, Jackson/Buchman, Anna/Akbari, Omar S.*, Cheating Evolution: Engineering Gene Drives to Manipulate the Fate of Wild Populations, 17 (2016) *Nature Rev. Genet.* 146–159
- Champer, Jackson/Reeves, Riona/Oh, Suh Yeon et al.*, Novel CRISPR/Cas9 Gene Drive Constructs Reveal Insights into Mechanisms of Resistance Allele Formation and Drive Efficiency in Genetically Diverse Populations, 13 (2017) *PLOS Genetics* e1006796
- Chang, Yen-Chiang/Zhao, Yue*, The Fukushima Nuclear Power Station Incident and Marine Pollution, 64 (2012) *Marine Pollution Bulletin* 897–901
- Charlesworth, B./Langley, C. H.*, The Population Genetics of Drosophila Transposable Elements, 23 (1989) *Annual Review of Genetics* 251–287

- Charney, Jonathan I., Third State Remedies for Environmental Damage to the World's Common Spaces, in: Francesco Francioni/Tullio Scovazzi (eds.), *International Responsibility for Environmental Harm* (Graham & Trotman, London 1991), 149–177
- Charpentier, Emmanuelle/van der Oost, John/White, Malcolm F., CrRNA Biogenesis, in: Rodolphe Barrangou/John van der Oost (eds.), *CRISPR-Cas Systems. RNA-Mediated Adaptive Immunity in Bacteria and Archaea* (Springer, Heidelberg/New York 2013), 115–144
- Chaudhary, Kulbhushan/Pratap, Dharmendra/Sharma, Pradeep K., Transcription Activator-like Effector Nucleases (TALENs): An Efficient Tool for Plant Genome Editing, 16 (2016) *Engineering in Life Sciences* 330–337
- Chen, Chun-Hong/Huang, Haixia/Ward, Catherine M. et al., A Synthetic Maternal-Effect Selfish Genetic Element Drives Population Replacement in *Drosophila*, 316 (2007) *Science* 597–600
- Cho, Seung Woo/Kim, Sojung/Kim, Yongsu et al., Analysis of Off-Target Effects of CRISPR/Cas-Derived RNA-Guided Endonucleases and Nickases, 24 (2014) *Genome Research* 132–141
- Chung, John J., The United Nations Compensation Commission and the Balancing of Rights Between Individual Claimants and the Government of Iraq, 10 (2005) *UCLA Journal of International Law & Foreign Affairs* 141–178
- Churchill, Robin R., Facilitating (Transnational) Civil Liability Litigation for Environmental Damage by Means of Treaties: Progress, Problems, and Prospects, 12 (2002) *YB Int'l Env. L.* 3–41
- Churchill, Robin R./Ulfstein, Geir, Autonomous Institutional Arrangements in Multilateral Environmental Agreements: A Little-Noticed Phenomenon in International Law, 94 (2000) *AJIL* 623
- Citorik, Robert J./Mimee, Mark/Lu, Timothy K., Sequence-Specific Antimicrobials Using Efficiently Delivered RNA-Guided Nucleases, 32 (2014) *Nature Biotech.* 1141–1145
- Clark, David P./Pazdernik, Nanette Jean/McGehee, Michelle R., *Molecular Biology* (3rd ed., Elsevier, London 2019)
- Cogan, Jacob Katz, Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica V. Nicaragua); Construction of a Road in Costa Rica Along the San Juan River (Nicaragua V. Costa Rica), 110 (2016) *AJIL* 320–326
- Cogley, Michael, Could Self-Spreading Vaccines Stop a Coronavirus Pandemic?, *The Telegraph*, 31 January 2020, available at: <https://www.telegraph.co.uk/technology/2020/01/28/could-self-spreading-vaccines-stop-global-coronavirus-pandemic/> (last accessed 28 May 2022)
- Cohen, Alexander F., *Cosmos 954 and the International Law of Satellite Accidents*, 10 (1984) *Yale L.J.* 78–91
- Cohen, Jon, Inside the Circle of Trust, 365 (2019) *Science* 430–437
- Did CRISPR Help – Or Harm – The First-Ever Gene-Edited Babies?, *Science News*, 01 August 2019, available at: <https://www.sciencemag.org/news/2019/08/did-crispr-help-or-harm-first-ever-gene-edited-babies> (last accessed 28 May 2022)

- Cohen, Stanley N./Chang, Annie C. Y./Boyer, Herbert W./Helling, Robert B., Construction of Biologically Functional Bacterial Plasmids in Vitro, 70 (1973) PNAS 3240–3244
- Collins, C. M./Bonds, J. A. S./Quinlan, M. M./Mumford, J. D., Effects of the Removal or Reduction in Density of the Malaria Mosquito, Anopheles Gambiae S.L., on Interacting Predators and Competitors in Local Ecosystems, 33 (2019) Medical and Veterinary Entomology 1–15
- Collins, Francis S., Statement on NIH Funding of Research Using Gene-Editing Technologies in Human Embryos (28 April 2015), available at: <https://www.nih.gov/about-nih/who-we-are/nih-director/statements/statement-nih-funding-research-using-gene-editing-technologies-human-embryos> (last accessed 28 May 2022)
- Committee on Strategies for Identifying and Addressing Potential Biodefense Vulnerabilities Posed by Synthetic Biology/Board on Chemical Sciences and Technology/Board on Life Sciences et al., Biodefense in the Age of Synthetic Biology (Washington (DC) 2018)
- Cong, Le/Ran, F. Ann/Cox, David et al., Multiplex Genome Engineering Using CRISPR/Cas Systems, 339 (2013) Science 819–823
- Connolly, John B./Mumford, John D./Fuchs, Silke et al., Systematic Identification of Plausible Pathways to Potential Harm via Problem Formulation for Investigational Releases of a Population Suppression Gene Drive to Control the Human Malaria Vector Anopheles Gambiae in West Africa, 20 (2021) Malaria Journal 170
- Cook, Kate, Liability: ‘No Liability, No Protocol’, in: Christoph Bail/Robert Falkner/Helen Marquard (eds.), The Cartagena Protocol on Biosafety. Reconciling Trade in Biotechnology with Environment and Development? (Earthscan, London 2002), 371–384
- Non-Parties, in: Christoph Bail/Robert Falkner/Helen Marquard (eds.), The Cartagena Protocol on Biosafety. Reconciling Trade in Biotechnology with Environment and Development? (Earthscan, London 2002), 351–360
- Cordonier Segger, Marie-Claire/Perron-Welch, Frederic et al. (eds.), Legal Aspects of Implementing the Cartagena Protocol on Biosafety (Cambridge University Press, Cambridge 2013)
- Cory, Jennifer S./Hirst, Mark L./Williams, Trevor et al., Field Trial of a Genetically Improved Baculovirus Insecticide, 370 (1994) Nature 138–140
- Cottier, Thomas/Müller, Jörg Paul, Estoppel, in: Rüdiger Wolfrum/Anne Peters (eds.), Max Planck Encyclopedia of Public International Law, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Courtier-Orgogozo, Virginie/Morizot, Baptiste/Boëte, Christophe, Agricultural Pest Control with CRISPR-based Gene Drive: Time for Public Debate: Should We Use Gene Drive for Pest Control?, 18 (2017) EMBO Reports 878–880
- Cowan, Peter J./Hawthorne, Wayne J./Nottle, Mark B., Xenogeneic Transplantation and Tolerance in the Era of CRISPR-Cas9, 24 (2019) Current Opinion in Organ Transplantation 5–11

- Cox, David B. T./Gootenberg, Jonathan S./Abudayyeh, Omar O. et al., RNA Editing with CRISPR-Cas13, 358 (2017) *Science* 1019–1027
- Craig, G. B./Hickey, W. A./VandeHey, R. C., An Inherited Male-Producing Factor in *Aedes Aegypti*, 132 (1960) *Science* 1887–1889
- Craik, Neil, *The International Law of Environmental Impact Assessment: Process, Substance and Integration* (Cambridge University Press, Cambridge 2008)
- Crawford, James, Second Report on State Responsibility, UN Doc. A/CN. 4/498 (1999)
- Third Report on State Responsibility, UN Doc. A/CN.4/507 and Add. 1–4 (2000)
- Fourth Report on State Responsibility, UN Doc. A/CN.4/517 and Add.1 (2001)
- International Crimes of States, in: James Crawford/Alain Pellet/Simon Olleson (eds.), *The Law of International Responsibility* (Oxford University Press, Oxford 2010), 405–414
- *State Responsibility: The General Part* (Cambridge University Press, Cambridge 2013)
- The International Court of Justice and the Law of State Responsibility, in: Christian J. Tams/James Sloan (eds.), *The Development of International Law by the International Court of Justice* (Oxford University Press, Oxford 2013), 71–86
- *Brownlie's Principles of Public International Law* (9th ed., Oxford University Press, Oxford 2019)
- Crawford, James/Olleson, Simon, The Continuing Debate on a UN Convention on State Responsibility, 54 (2005) *ICLQ* 959–971
- Cripps, Yvonne, A New Frontier for International Law, 29 (1980) *ICLQ* 1–20
- CropLife International*, The Compact, available at: <http://www.biodiversitycompact.org/> (last accessed 28 May 2022)
- CropLife International/Global Industry Coalition*, Implementation Guide to the Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety (2013), available at: <https://croplife.org/wp-content/uploads/2014/04/Implementation-Guide-to-the-Nagoya-Kuala-Lumpur-Supplementary-Protocol-on-Liability-and-Redress-to-the-Cartagena-Protocol-on-Biosafety.pdf> (last accessed 28 May 2022)
- Cullet, Philippe, Liability and Redress for Modern Biotechnology, 15 (2006) *YB Int'l Env. L.* 165–195
- Cyranoski, David, Russian 'CRISPR-Baby' Scientist Has Started Editing Genes in Human Eggs with Goal of Altering Deaf Gene, 574 (2019) *Nature* 465–466
- What CRISPR-Baby Prison Sentences Mean for Research, 577 (2020) *Nature* 154–155
- Czybulka, Detlef, Article 196 UNCLOS, in: Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea: A Commentary* (C.H.Beck/Hart/Nomos, München et al. 2017)

- Daniel, Anne*, Civil Liability Regimes as a Complement to Multilateral Environmental Agreements: Sound International Policy or False Comfort?, 12 (2003) RECIEL 225–241
- David, Aaron S./Kaser, Joe M./Morey, Amy C./Roth, Alexander M./Andow, David A.*, Release of Genetically Engineered Insects: A Framework to Identify Potential Ecological Effects, 3 (2013) Ecology and Evolution 4000–4015
- Dawidowicz, Martin*, Third-Party Countermeasures: A Progressive Development of International Law?, 29 (2016) QIL 3–15
- de La Fayette, Louise Angélique*, International Liability for Damage to the Environment, in: Malgosia A. Fitzmaurice/David Ong/Panos Merkouris (eds.), Research Handbook on International Environmental Law (Edward Elgar, Cheltenham 2010), 320–360
- Dederer, Hans-Georg*, The Challenge of Regulating Genetically Modified Organisms in the European Union: Trends and Issues, in: Yumiko Nakanishi (ed.), Contemporary Issues in Environmental Law. The EU and Japan (Springer, Tokyo et al. 2016), 139–168
- Options for the Regulation of Genome Edited Plants – Framing the Issues, in: Christian Dürnberger/Sebastian Pfeilmeier/Stephan Schleissing (eds.), Genome Editing in Agriculture. Between Precaution and Responsibility (Nomos, Baden-Baden 2019), 77–122
- Dederer, Hans-Georg/Hamburger, David* (eds.), Regulation of Genome Editing in Plant Biotechnology: A Comparative Analysis of Regulatory Frameworks of Selected Countries and the EU (Springer International Publishing, Cham 2019)
- Defense Advanced Research Projects Agency*, Broad Agency Announcement: Insect Allies: HR001117S000 (2016), available at: <http://web.evolbio.mpg.de/HEGAAs/files/links-to-information-source/hr001117s0002-copy.pdf> (last accessed 28 May 2022)
- PREventing EMerging Pathogenic Threats (PREEMPT) (17 November 2020), available at: <https://www.darpa.mil/program/preventing-emerging-pathogenic-threats> (last accessed 28 May 2022)
- Deltcheva, Elitza/Chylinski, Krzysztof/Sharma, Cynthia M.* et al., CRISPR RNA Maturation by Trans-Encoded Small RNA and Host Factor RNase III, 471 (2011) Nature 602–607
- Deredec, Anne/Burt, Austin/Godfray, H. C. J.*, The Population Genetics of Using Homing Endonuclease Genes in Vector and Pest Management, 179 (2008) Genetics 2013–2026
- Deredec, Anne/Godfray, H. Charles J./Burt, Austin*, Requirements for Effective Malaria Control with Homing Endonuclease Genes, 108 (2011) PNAS E874–80
- Descamps, Hannes/Slabbinck, Robin* et al. (eds.), International Documents on Environmental Liability (Springer Netherlands, Dordrecht 2008)

- Desierto, Diane*, Evidence but not Empiricism? Environmental Impact Assessments at the International Court of Justice in Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua) and Construction of a Road in Costa Rica Along the San Juan River (Nicaragua v. Costa Rica), EJIL: Talk!, 26 February 2016, available at: <http://www.ejiltalk.org/evidence-but-not-empiricism-environmental-impact-assessments-at-the-international-court-of-justice-in-certain-activities-carried-out-by-nicaragua-in-the-border-area-costa-rica-v-nicaragua-and-con/> (last accessed 28 May 2022)
- Deveau, Hélène/Barrangou, Rodolphe/Garneau, Josiane E. et al.*, Phage Response to CRISPR-Encoded Resistance in *Streptococcus Thermophilus*, 190 (2008) *Journal of Bacteriology* 1390–1400
- Dhole, Sumit/Vella, Michael R./Lloyd, Alun L./Gould, Fred*, Invasion and Migration of Spatially Self-limiting Gene Drives: A Comparative Analysis, 11 (2018) *Evolutionary Applications* 794–808
- DiCarlo, James E./Chavez, Alejandro/Dietz, Sven L./Esvelt, Kevin M./Church, George M.*, Safeguarding CRISPR-Cas9 Gene Drives in Yeast, 33 (2015) *Nature Biotech.* 1250–1255
- Dolezel, Marion/Lüthi, Christoph/Gaugitsch, Helmut*, Beyond Limits – The Pitfalls of Global Gene Drives for Environmental Risk Assessment in the European Union, 15 (2020) *BioRisk* 1–29
- Dolzer, Rudolf*, Völkerrechtliche Verantwortlichkeit und Haftung für Umweltschäden, in: *Umweltschutz im Völkerrecht und Kollisionsrecht* (C.F. Müller, Heidelberg 1992), 195–243
- Domingo, José L.*, Safety Assessment of GM Plants: An Updated Review of the Scientific Literature, 95 (2016) *Food and Chemical Toxicology* 12–18
- Dong, Huirong/Huang, Yong/Wang, Kejian*, The Development of Herbicide Resistance Crop Plants Using CRISPR/Cas9-Mediated Gene Editing, 12 (2021) *Genes* 912
- Dörr, Oliver*, Article 31 VCLT, in: Oliver Dörr/Kirsten Schmalenbach (eds.), *Vienna Convention on the Law of Treaties* (2nd ed., Springer, Berlin, Heidelberg 2018)
- Article 32 VCLT, in: Oliver Dörr/Kirsten Schmalenbach (eds.), *Vienna Convention on the Law of Treaties* (2nd ed., Springer, Berlin, Heidelberg 2018)
- Douhan, Alena*, Liability for Environmental Damage, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Drury, Douglas W./Dapper, Amy L./Siniard, Dylan J./Zentner, Gabriel E./Wade, Michael J.*, CRISPR/Cas9 Gene Drives in Genetically Variable and Nonrandomly Mating Wild Populations, 3 (2017) *Science Advances* e1601910
- Duall, Elizabeth*, Liability and Redress Regime for Genetically Modified Organisms Under the Cartagena Protocol, 36 (2007) *Geo. Wash. Int'l L. Rev.* 173–201
- Dudley, Joseph P./Woodford, Michael H.*, Bioweapons, Biodiversity, and Ecocide: Potential Effects of Biological Weapons on Biological Diversity, 52 (2002) *Bio-Science* 583

- Dugard, John*, Diplomatic Protection, in: Rüdiger Wolfrum/Anne Peters (eds.), Max Planck Encyclopedia of Public International Law, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Dunning Hotopp, Julie C.*, Horizontal Gene Transfer Between Bacteria and Animals, 27 (2011) Trends in Genetics 157–163
- Dupuy, Pierre-Marie*, Due Diligence in the International Law of Liability, in: OECD (ed.), Legal Aspects of Transfrontier Pollution (Paris 1977), 369
- Reviewing the Difficulties of Codification: On Ago’s Classification of Obligations of Means and Obligations of Result in Relation to State Responsibility, 10 (1999) EJIL 371–385
- Dutch Commission on Genetic Modification (COGEM)*, The Status of Oligonucleotides Within the Context of Site-Directed Mutagenesis: 100701–03 (2010), available at: <https://cogem.net/app/uploads/2019/07/100703-01-The-status-of-oligonucleotides-within-the-context-of-site-directed-mutagenesis.pdf> (last accessed 28 May 2022)
- Duwic-Paoli, Leslie-Anne*, The Status of the Right to Public Participation in International Environmental Law: An Analysis of the Jurisprudence, 23 (2012) YB Int’l Env. L. 80–105
- The Prevention Principle in International Environmental Law (Cambridge University Press, Cambridge 2018)
- Ebbesson, Jonas*, Public Participation in Environmental Matters, in: Rüdiger Wolfrum/Anne Peters (eds.), Max Planck Encyclopedia of Public International Law, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Eckhoff, Philip A./Wenger, Edward A./Godfray, H. Charles J./Burt, Austin*, Impact of Mosquito Gene Drive on Malaria Elimination in a Computational Model with Explicit Spatial and Temporal Dynamics, 114 (2017) PNAS E255–E264
- Economides, Constantin P.*, Content of the Obligation: Obligations of Means and Obligations of Result, in: James Crawford/Alain Pellet/Simon Olleson (eds.), The Law of International Responsibility (Oxford University Press, Oxford 2010), 373–381
- Eggers, Barbara/Mackenzie, Ruth*, The Cartagena Protocol on Biosafety, 3 (2000) J. Int. Econ. L. 525–543
- Ehrenzweig, Albert A.*, Products Liability in the Conflict of Laws—Toward a Theory of Enterprise Liability Under Foreseeable and Insurable Laws, 69 (1960) Yale L.J. 794–803
- Ellison, Evan E./Nagalakshmi, Ugrappa/Gamo, Maria Elena et al.*, Multiplexed Heritable Gene Editing Using RNA Viruses and Mobile Single Guide RNAs, 6 (2020) Nature Plants 620–624
- ENCODE Project Consortium*, An Integrated Encyclopedia of DNA Elements in the Human Genome, 489 (2012) Nature 57
- Endres, A. Bryan*, “GMO:” Genetically Modified Organism or Gigantic Monetary Obligation? The Liability Schemes for GMO Damage in the United States and the European Union, 22 (2000) Loyola of Los Angeles International and Comparative Law Review 453–505

- Epiney, Astrid*, The Role of NGOs in the Process of Ensuring Compliance with MEAs, in: Ulrich Beyerlin/Peter-Tobias Stoll/Rüdiger Wolfrum (eds.), Ensuring Compliance with Multilateral Environmental Agreements. A Dialogue Between Practitioners and Academia (Martinus Nijhoff, Leiden 2006), 319–352
- Eriksson, Dennis*, Recovering the Original Intentions of Risk Assessment and Management of Genetically Modified Organisms in the European Union, 6 (2018) *Front. Bioeng. & Biotechnol.* 845
- Eriksson, Dennis/Custers, René/Edvardsson Björnberg, Karin et al.*, Options to Reform the European Union Legislation on GMOs: Scope and Definitions, 38 (2020) *Trends in Biotechnology* 231–234
- Eriksson, Dennis/Kershen, Drew L./Nepomuceno, Alexandre et al.*, A Comparison of the EU Regulatory Approach to Directed Mutagenesis with that of Other Jurisdictions, Consequences for International Trade and Potential Steps Forward, 222 (2019) *New Phytologist* 1673–1684
- Espinosa, Juan-Francisco Escudero*, The Definition of Damage Resulting from Transboundary Movements of Living Modified Organisms in Light of the Cartagena Protocol, 47 (2009) *Canadian YBIL* 319–342
- Esrick, Erica B./Lehmann, Leslie E./Biffi, Alessandra et al.*, Post-Transcriptional Genetic Silencing of BCL11A to Treat Sickle Cell Disease, 384 (2021) *N. Engl. J. Med.* 205–215
- Evelt, Kevin M./Gemmell, Neil J.*, Conservation Demands Safe Gene Drive, 15 (2017) *PLOS Biology* e2003850
- Evelt, Kevin M./Smidler, Andrea L./Catteruccia, Flaminia/Church, George M.*, Concerning RNA-Guided Gene Drives for the Alteration of Wild Populations, 3 (2014) *eLife* e03401
- Etty, Thijs F.M.*, 7. *Biotechnology*, 22 (2011) *YB Int'l Env. L.* 318–332
- European Group on Ethics in Science and New Technologies*, Statement on Gene Editing (2016), available at: https://ec.europa.eu/info/sites/default/files/research_and_innovation/egc/gene_editing_egc_statement.pdf (last accessed 28 May 2022)
- Falck-Zepeda, José B.*, Socio-Economic Considerations, Article 26.1 of the Cartagena Protocol on Biosafety: What Are the Issues and What Is at Stake?, 12 (2009) *AgBioForum* 90–107
- Falkner, Robert*, Regulating Biotech Trade: The Cartagena Protocol on Biosafety, 76 (2000) *International Affairs* 299–313
- Faure, Michael G.*, Economic Criteria for Compulsory Insurance, 31 (2006) *The Geneva Papers on Risk and Insurance* 149–168
- Faure, Michael G./Jiang, Minzhen*, Study on Financial Security Mechanisms (Article 10 of the Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress), UN Doc. CBD/CP/MOP/10/INF/1, Annex (2021) (last accessed 28 May 2022)

- Faure, Michael G./Wibisana, Andri*, Liability in Cases of Damage Resulting from GMOs: An Economic Perspective, in: Bernhard A. Koch/Bjarte Askeland (eds.), *Economic Loss Caused by Genetically Modified Organisms. Liability and Redress for the Adventitious Presence of GMOs in Non-GM Crops* (Springer, Vienna/New York 2008), 531–575
- Liability for Damage Caused by GMOs: An Economic Perspective, 23 (2010) *Geo. Int'l Env'tl. L. Rev.* 1–69
- Fears, Robin*, Assessing the Security Implications of Genome Editing Technology: Report of an International Workshop, Herrenhausen, Germany, 11–13 October 2017 (Herrenhausen 2018), available at: https://www.volkswagenstiftung.de/sites/default/files/downloads/Summary_Report_Genome_Editing.pdf (last accessed 28 May 2022)
- Fedder, B.*, *Marine Genetic Resources, Access and Benefit Sharing: Legal and Biological Perspectives* (Routledge, London 2013)
- Fellmeth, Aaron X./Horwitz, Maurice*, *Guide to Latin in International Law* (Oxford University Press, Oxford 2011)
- Fernández, Almudena/Josa, Santiago/Montoliu, Lluís*, A History of Genome Editing in Mammals, 28 (2017) *Mammalian Genome* 237–246
- Field, Barry C./Field, Martha K.*, *Environmental Economics: An Introduction* (7th ed., McGraw-Hill Education, New York 2017)
- Field, Matt*, Experts Know the New Coronavirus Is Not a Bioweapon. They Disagree on Whether It Could Have Leaked from a Research Lab, *Bulletin of the Atomic Scientists*, 30 March 2020, available at: <https://the-bulletin.org/2020/03/experts-know-the-new-coronavirus-is-not-a-bioweapon-they-disagree-on-whether-it-could-have-leaked-from-a-research-lab/> (last accessed 28 May 2022)
- Fitzmaurice, Malgosia A.*, Liability for Environmental Damage Caused to the Global Commons, 5 (1996) *RECIEL* 305–311
- Non-Compliance Procedures and the Law of Treaties, in: Tullio Treves/Laura Pineschi et al. (eds.), *Non-Compliance Procedures and Mechanisms and the Effectiveness of International Environmental Agreements* (T.M.C. Asser Press, The Hague 2009), 453–481
- Fitzmaurice, Malgosia A./Redgwell, C.*, Environmental Non-Compliance Procedures and International Law, 31 (2000) *Netherlands Yearbook of International Law* 35
- Fogleman, Valerie*, Enforcing the Environmental Liability Directive: Duties, Powers and Self-Executing Provisions, 4 (2006) *Environmental Liability* 127–146
- Fontaubert, A. Charlotte de/Agardy, Tundi S./Downes, David R.*, *Biodiversity in the Seas: Implementing the Convention on Biological Diversity in Marine and Coastal Habitats* (IUCN/CIEL Center for International Environmental Law/World Wildlife Fund, Gland et al. 1996)
- Food and Agriculture Organization of the United Nations/World Health Organization*, *Codex Alimentarius: Members*, available at: <http://www.fao.org/fao-who-codex-alimentarius/about-codex/members/en/> (last accessed 28 May 2022)

- Förster, Susanne*, Internationale Haftungsregeln für schädliche Folgewirkungen gentechnisch veränderter Organismen: Europäische und internationale Entwicklungen und Eckwerte für ein Haftungsregime im internationalen Recht (Springer, Berlin et al. 2007)
- Forteau, Mathias*, Reparation in the Event of a Circumstance Precluding Wrongfulness, in: James Crawford/Alain Pellet/Simon Olleson (eds.), *The Law of International Responsibility* (Oxford University Press, Oxford 2010), 887–893
- Foster, Caroline E.*, The ILC Draft Principles on the Allocation of Loss in the Case of Transboundary Harm Arising Out of Hazardous Activities: Privatizing Risk?, 14 (2005) *RECIEL* 265–282
- Science and the Precautionary Principle in International Courts and Tribunals: Expert Evidence, Burden of Proof and Finality (Cambridge University Press, Cambridge 2011), available at: <http://gbv.ebib.com/patron/FullRecord.aspx?p=691838> (last accessed 28 May 2022)
- Diminished Ambitions? Public International Legal Authority in the Transnational Economic Era, 17 (2014) *J. Int. Econ. L.* 355–397
- Fraley, Robert T./Rogers, Stephen G./Horsch, Robert B.* et al., Expression of Bacterial Genes in Plant Cells, 80 (1983) *PNAS* 4803–4807
- Francioni, Francesco*, Exporting Environmental Hazard Through Multinational Enterprises: Can the State of Origin Be Held Responsible?, in: Francesco Francioni/Tullio Scovazzi (eds.), *International Responsibility for Environmental Harm* (Graham & Trotman, London 1991), 275–316
- Francioni, Francesco/Scovazzi, Tullio* (eds.), *International Responsibility for Environmental Harm* (Graham & Trotman, London 1991)
- Frangoul, Haydar/Altshuler, David/Cappellini, M. Domenica* et al., CRISPR-Cas9 Gene Editing for Sickle Cell Disease and B-Thalassemia, 384 (2021) *N. Engl. J. Med.* 252–260
- Fransen, Lindsey/La Vina, Antonio/Dayrit, Fabian* et al., Integrating Socio-Economic Considerations into Biosafety Decisions: The Role of Public Participation (2005), available at: http://pdf.wri.org/fransen_lavina_biosafetywhitepaper.pdf (last accessed 28 May 2022)
- Fraser, Malcolm J.*, Insect Transgenesis: Current Applications and Future Prospects, 57 (2012) *Annual Review of Entomology* 267–289
- Freestone, David*, Responsibilities and Obligations of States Sponsoring Persons and Entities with Respect to Activities in the Area, 105 (2011) *AJIL* 755–760
- Frey, Joachim*, Biological Safety Concepts of Genetically Modified Live Bacterial Vaccines, 25 (2007) *Vaccine* 5598–5605
- Friedrich, Jürgen*, Environment, Private Standard-Setting, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Friedrichs, Steffi/Takasu, Yoko/Kearns, Peter* et al., An Overview of Regulatory Approaches to Genome Editing in Agriculture, 3 (2019) *Biotechnology Research and Innovation* 208–220

- Frouville, Olivier de*, Attribution of Conduct to the State: Private Individuals, in: James Crawford/Alain Pellet/Simon Olleson (eds.), *The Law of International Responsibility* (Oxford University Press, Oxford 2010), 257–280
- Futami, Eriko/Otsuka, Tadashi*, A Japanese Approach to the Domestic Implementation of the Supplementary Protocol, in: Akiho Shibata (ed.), *International Liability Regime for Biodiversity Damage. The Nagoya-Kuala Lumpur Supplementary Protocol* (Taylor & Francis, London 2014), 201–217
- Gaines, Sanford E.*, International Principles for Transnational Environmental Liability: Can Developments in Municipal Law Help Break the Impasse?, 30 (1989) *Harv. Int'l L. J.* 311–349
- Gaines, Todd A./Zhang, Wenli/Wang, Dafu et al.*, Gene Amplification Confers Glyphosate Resistance in *Amaranthus Palmeri*, 107 (2010) *PNAS* 1029–1034
- Gaj, Thomas/Gersbach, Charles A./Barbas, Carlos F.*, ZFN, TALEN, and CRISPR/Cas-Based Methods for Genome Engineering, 31 (2013) *Trends in Biotechnology* 397–405
- Gaja, Giorgio*, States Having an Interest in Compliance with the Obligation Breached, in: James Crawford/Alain Pellet/Simon Olleson (eds.), *The Law of International Responsibility* (Oxford University Press, Oxford 2010), 957–964
- The Concept of an Injured State, in: James Crawford/Alain Pellet/Simon Olleson (eds.), *The Law of International Responsibility* (Oxford University Press, Oxford 2010), 941–947
- Galizi, Roberto/Doyle, Lindsey A./Menichelli, Miriam et al.*, A Synthetic Sex Ratio Distortion System for the Control of the Human Malaria Mosquito, 5 (2014) *Nature Comms.* 3977
- Galizi, Roberto/Hammond, Andrew/Kyrou, Kyros et al.*, A CRISPR-Cas9 Sex-Ratio Distortion System for Genetic Control, 6 (2016) *Sci. Rep.* 31139
- Gantz, Valentino M./Bier, Ethan*, The Mutagenic Chain Reaction: A Method for Converting Heterozygous to Homozygous Mutations, 348 (2015) *Science* 442–444
- Gantz, Valentino M./Jasinskiene, Nijole/Tatarenkova, Olga et al.*, Highly Efficient Cas9-Mediated Gene Drive for Population Modification of the Malaria Vector Mosquito *Anopheles Stephensi*, 112 (2015) *PNAS* E6736–43
- Garforth, Kathryn*, Socio-Economic Considerations in Biosafety Decision-Making: An International Sustainable Development Law Perspective, CISDL Working Paper; unpublished, on file with author (2004)
- Garneau, Josiane E./Dupuis, Marie-Eve/Villion, Manuela et al.*, The CRISPR/Cas Bacterial Immune System Cleaves Bacteriophage and Plasmid DNA, 468 (2010) *Nature* 67–71
- Garner, Bryan A.* (ed.), *Black's Law Dictionary* (11th ed., Thomson Reuters, St. Paul, Minn. 2019)
- Garrood, William T./Kranjc, Nace/Petri, Karl et al.*, Analysis of Off-Target Effects in CRISPR-Based Gene Drives in the Human Malaria Mosquito, 118 (2021) *PNAS*

- Gasiunas, Giedrius/Barrangou, Rodolphe/Horvath, Philippe/Siksnys, Virginijus*, Cas9–crRNA Ribonucleoprotein Complex Mediates Specific DNA Cleavage for Adaptive Immunity in Bacteria, 109 (2012) PNAS E2579–86
- Gassmann, Aaron J./Petzold-Maxwell, Jennifer L./Clifton, Eric H. et al.*, Field-Evolved Resistance by Western Corn Rootworm to Multiple *Bacillus Thuringiensis* Toxins in Transgenic Maize, 111 (2014) PNAS 5141–5146
- Gaudelli, Nicole M./Komor, Alexis C./Rees, Holly A. et al.*, Programmable Base Editing of A•T to G•C in Genomic DNA Without DNA Cleavage, 551 (2017) Nature 464
- Gaugitsch, Helmut*, Under the Cartagena Protocol on Biosafety – Where Is the Roadmap for Risk Assessment Taking Us?, 3 (2015) Front. Bioeng. & Biotechnol. 212
- Gaulkin, Thomas/Field, Matt*, WHO’s “Exciting Adventure” to Find the Origins of COVID-19 Runs into Trouble, Bulletin of the Atomic Scientists, 30 March 2021, available at: <https://thebulletin.org/2021/03/whos-exciting-adventure-to-find-the-origins-of-covid-19-runs-into-trouble/> (last accessed 28 May 2022)
- Gautier, Philippe*, Environmental Damage and the United Nations Claims Commission: New Directions for Future International Environmental Cases?, in: Tafsir M. Ndiaye/Rüdiger Wolfrum (eds.), Law of the Sea, Environmental Law, and Settlement of Disputes. Liber Amicorum Judge Thomas A. Mensah (Martinus Nijhoff, Leiden/Boston 2010), 177–214
- Ge, Xia/d'Avignon, D. André/Ackerman, Joseph J. H./Sammons, R. Douglas*, Rapid Vacuolar Sequestration: The Horseweed Glyphosate Resistance Mechanism, 66 (2010) Pest Management Science 345–348
- Geens, Stefan*, About Costa Rica, Nicaragua, Their Mutual Border, and Google, Ogle Earth, 07 November 2010, available at: <https://ogleearth.com/2010/11/about-costa-rica-nicaragua-their-border-and-google/> (last accessed 28 May 2022)
- George, Dalton R./Kuiken, Todd/Delborne, Jason A.*, Articulating ‘Free, Prior and Informed Consent’ (FPIC) For Engineered Gene Drives, 286 (2019) Proc. R. Soc. B 20191484
- German Central Committee on Biological Safety (ZKBS)*, Position Statement of the ZKBS on the Classification of Genetic Engineering Operations for the Production and Use of Higher Organisms Using Recombinant Gene Drive Systems, Az. 45310.0111 (2016), available at: http://www.bvl.bund.de/SharedDocs/Downloads/06_Gentechnik/ZKBS/01_Allgemeine_Stellungnahmen_deutsch/01_allgemeine_Themen/Bewertung_von_Gene_drive_Systemen.pdf?__blob=publicationFile&cv=4 (last accessed 28 May 2022)
- German Ethics Council*, Biosecurity – Freedom and Responsibility of Research: Opinion (2014), available at: <https://www.ethikrat.org/fileadmin/Publikationen/Stellungnahmen/englisch/opinion-biosecurity.pdf> (last accessed 28 May 2022)
- Intervening in the Human Germline: Opinion (2019), available at: <https://www.ethikrat.org/fileadmin/Publikationen/Stellungnahmen/englisch/opinion-intervening-in-the-human-germline-summary.pdf> (last accessed 28 May 2022)

- Gerstein, Daniel M., National Security and Arms Control in the Age of Biotechnology: The Biological and Toxin Weapons Convention (Rowman & Littlefield Publishers, Lanham et al. 2013)
- Giese, Bernd, The Viral Era: New Biotechnologies Give Humans an Unprecedented Control over Nature and Require Appropriate Safeguards, 22 (2021) EMBO Reports e53229
- Glenn, Jane Matthews, Damage Caused by GMOs Under Canadian Law, in: Bernhard A. Koch (ed.), Damage Caused by Genetically Modified Organisms. Comparative Survey of Redress Options for Harm to Persons, Property or the Environment (De Gruyter, Berlin/New York 2010), 663–714
- Glowka, Lyle/Burhenne-Guilmin, Françoise/Synge, Hugh et al., A Guide to the Convention on Biological Diversity (IUCN, Gland/Cambridge 1994)
- Godfray, H. Charles J./North, Ace/Burt, Austin, How Driving Endonuclease Genes Can Be Used to Combat Pests and Disease Vectors, 15 (2017) BMC Biology 81
- Goldblat, Jozef, The Biological Weapons Convention: An Overview, 37 (1997) International Review of the Red Cross Archive 251–265
- Goldie, L.F.E., Concepts of Strict and Absolute Liability and the Ranking of Liability in Terms of Relative Exposure to Risk, 16 (1985) NYL 175
- Goldson, S. L./Bourdôt, G. W./Brockerhoff, E. G. et al., New Zealand Pest Management: Current and Future Challenges, 45 (2015) Journal of the Royal Society of New Zealand 31–58
- Gomaa, Ahmed A./Klumpe, Heidi E./Luo, Michelle L. et al., Programmable Removal of Bacterial Strains by Use of Genome-Targeting CRISPR-Cas Systems, 5 (2014) mBio e00928–13
- Gong, Zheng/Cheng, Ming/Botella, Jose R., Non-GM Genome Editing Approaches in Crops, 3 (2021) Frontiers in Genome Editing 817279
- Gostin, Lawrence O./DeBartolo, Mary C./Friedman, Eric A., The International Health Regulations 10 Years on: The Governing Framework for Global Health Security, 386 (2015) The Lancet 2222–2226
- Gostin, Lawrence O./Habibi, Roojin/Meier, Benjamin Mason, Has Global Health Law Risen to Meet the COVID-19 Challenge? Revisiting the International Health Regulations to Prepare for Future Threats, 48 (2020) The Journal of Law, Medicine & Ethics 376–381
- Gouritin, Armelle, EU Environmental Law, International Environmental Law, and Human Rights Law: The Case of Environmental Responsibility (Brill Nijhoff, Leiden 2016)
- Graff, Laurence, The Precautionary Principle, in: Christoph Bail/Robert Falkner/Helen Marquard (eds.), The Cartagena Protocol on Biosafety. Reconciling Trade in Biotechnology with Environment and Development? (Earthscan, London 2002), 410–422
- Grohmann, Lutz/Keilwagen, Jens/Duensing, Nina et al., Detection and Identification of Genome Editing in Plants: Challenges and Opportunities, 10 (2019) Frontiers in Plant Science 236

- Gullison, Ted/Hardner, Jared/Anstee, Stuart/Meyer, Mike, Good Practices for the Collection of Biodiversity Baseline Data (2015), available at: https://publications.iadb.org/bitstream/handle/11319/7096/Good_Practices_for_the_Collection_of_Biodiversity_Baseline_Data.pdf?sequence=1&isAllowed=y (last accessed 28 May 2022)
- Gupta, Aarti, Framing “Biosafety” in an International Context: The Biosafety Protocol Negotiations, ENRP Discussion Paper E-99–10 (1999), available at: <https://www.belfercenter.org/sites/default/files/files/publication/Framing%20Biosafety%20in%20an%20International%20Context%20-%20E-99-10.pdf> (last accessed 28 May 2022)
- Creating a Global Biosafety Regime, 2 (2000) *International Journal of Biotechnology* 205–230
- Governing Trade in Genetically Modified Organisms: The Cartagena Protocol on Biosafety, 42 (2000) *Environment: Science and Policy for Sustainable Development* 22–33
- Transparency to What End? Governing by Disclosure Through the Biosafety Clearing House, 28 (2010) *Environment and Planning C: Government and Policy* 128–144
- Gupta, Aarti/Osini, Amandine, Liability, Redress and the Cartagena Protocol, Chapter III.32, in: Elisa Morgera/Jona Razzaque/Michael G. Faure (eds.), *Biodiversity and Nature Protection Law*, Elgar Encyclopedia of Environmental Law, Volume III (Edward Elgar, Cheltenham, UK/Northampton, MA 2017), 445–454
- Gurwitz, David, Gene Drives Raise Dual-Use Concerns, 345 (2014) *Science* 1010
- Habibi, Roojin/Burci, Gian Luca/Campos, Thana C. de et al., Do Not Violate the International Health Regulations During the COVID-19 Outbreak, 395 (2020) *The Lancet* 664–666
- Haeussler, Maximilian/Schönig, Kai/Eckert, Hélène et al., Evaluation of Off-Target and on-Target Scoring Algorithms and Integration into the Guide RNA Selection Tool CRISPOR, 17 (2016) *Genome Biology* 148
- Hafner, Gerhard/Buffard, Isabelle, Obligations of Prevention and the Precautionary Principle, in: James Crawford/Alain Pellet/Simon Olleson (eds.), *The Law of International Responsibility* (Oxford University Press, Oxford 2010), 521–534
- Hamburger, David, Comparative Analysis: The Regulation of Plants Derived from Genome Editing in Argentina, Australia, Canada, the European Union, Japan and the United States, in: Hans-Georg Dederer/David Hamburger (eds.), *Regulation of Genome Editing in Plant Biotechnology. A Comparative Analysis of Regulatory Frameworks of Selected Countries and the EU* (Springer International Publishing, Cham 2019), 313–363
- Hamdan, Norfadilah/Lee, Chia Hau/Wong, Syie Luing et al., Prevention of Enzymatic Browning by Natural Extracts and Genome-Editing: A Review on Recent Progress, 27 (2022) *Molecules* 1101
- Hammond, Andrew/Galizi, Roberto/Kyrou, Kyros et al., A CRISPR-Cas9 Gene Drive System Targeting Female Reproduction in the Malaria Mosquito Vector *Anopheles Gambiae*, 34 (2016) *Nature Biotech.* 78

- Hammond, Andrew/Pollegioni, Paola/Persampieri, Tania et al., Gene-Drive Suppression of Mosquito Populations in Large Cages as a Bridge Between Lab and Field, 12 (2021) Nature Comms. 4589
- Hammond, Andrew M./Kyrou, Kyros/Bruttini, Marco et al., The Creation and Selection of Mutations Resistant to a Gene Drive over Multiple Generations in the Malaria Mosquito, 13 (2017) PLOS Genetics e1007039
- Handl, Günther, An International Legal Perspective on the Conduct of Abnormally Dangerous Activities in Frontier Areas: The Case of Nuclear Power Plant Siting, 7 (1978) ELQ 1–50
- State Liability for Accidental Transnational Environmental Damage by Private Persons, 74 (1980) AJIL 525–565
- The Environment: International Rights and Responsibilities, 74 (1980) ASIL Proceedings 223–247
- Liability as an Obligation Established by a Primary Rule of International Law: Some Basic Reflections on the International Law Commission's Work, 16 (1985) NYL 49
- International Accountability for Transboundary Environmental Harm Revisited: What Role for State Liability?, 37 (2007) Environmental Policy and Law 117–125
- Transboundary Impacts, in: Daniel Bodansky/Jutta Brunnée/Ellen Hey (eds.), The Oxford Handbook of International Environmental Law (Oxford University Press, Oxford 2007), 531–549
- Handl, Günther/Lutz, Robert E., An International Policy Perspective on the Trade of Hazardous Materials and Technologies, 30 (1989) Harv. Int'l L. J. 351–374
- Hanley, Nick, The Economic Value of Environmental Damage, in: Michael Bowman/Alan E. Boyle (eds.), Environmental Damage in International and Comparative Law. Problems of Definition and Valuation (Oxford University Press, Oxford/New York 2002), 27–39
- Hartke, Victoria Riess, The International Fallout from Chernobyl, 5 (1987) Dickinson Journal of International Law 319–343
- Hartung, Frank/Schiemann, Joachim, Precise Plant Breeding Using New Genome Editing Techniques: Opportunities, Safety and Regulation in the EU, 78 (2014) The Plant Journal 742–752
- Haupt, Kirsten/Mützelburg, Thomas, Global Radiation Monitoring in the Wake of the Fukushima Disaster, 16 (2011) CTBTO Spectrum 18–19
- Hay, David (ed.), Words and Phrases: Legally Defined, Volume 1: A-K (4th ed., LexisNexis Butterworths, London 2007)
- Hayes, Keith R./Hosack, Geoffrey R./Dana, Genya V. et al., Identifying and Detecting Potentially Adverse Ecological Outcomes Associated with the Release of Gene-Drive Modified Organisms, 5 (2018) Journal of Responsible Innovation S139–S158

- Hayes, Keith R./Hosack, Geoffrey R./Ickowicz, Adrien et al., Risk Assessment for Controlling Mosquito Vectors with Engineered Nucleases: Controlled Field Release for Sterile Male Construct: Risk Assessment Final Report (2018), available at: https://targetmalaria.org/wp-content/uploads/2021/02/CSIRO_Target_Malaria_Risk_Assessment_Sterile_Males_plus_Executive_Summary1.pdf (last accessed 28 May 2022)
- He Jiankui, About Lulu and Nana: Twin Girls Born Healthy After Gene Surgery as Single-Cell Embryos (31 March 2021), available at: <https://www.youtube.com/watch?v=th0vnOmFltc> (last accessed 28 May 2022)
- Heathcote, Sarah, Circumstances Precluding Wrongfulness in the ILC Articles on State Responsibility: Necessity, in: James Crawford/Alain Pellet/Simon Olleson (eds.), *The Law of International Responsibility* (Oxford University Press, Oxford 2010), 491–501
- Heck, Michelle, Insect Transmission of Plant Pathogens: A Systems Biology Perspective, 3 (2018) *mSystems* e00168–17
- Hefferon, Kathleen L., Nutritionally Enhanced Food Crops; Progress and Perspectives, 16 (2015) *International Journal of Molecular Sciences* 3895–3914
- Heffron, Raphael J./Ashley, Stephen F./Nuttall, William J., The Global Nuclear Liability Regime Post Fukushima Daiichi, 90 (2016) *Progress in Nuclear Energy* 1–10
- Heinsch, Robert, Conflict Classification in Ukraine: The Return of the “Proxy War”?, 91 (2015) *International Law Studies* 323–360
- Hellmich, Simon Niklas, What Is Socioeconomics? An Overview of Theories, Methods, and Themes in the Field, 46 (2017) *Forum for Social Economics* 3–25
- Hemmings, Alan D., Liability Postponed: The Failure to Bring Annex VI of the Madrid Protocol into Force, 8 (2018) *The Polar Journal* 315–332
- Henckaerts, Jean-Marie/Doswald-Beck, Louise, *Customary International Humanitarian Law, Volume I: Rules* (Cambridge University Press, Cambridge 2005)
- Henckels, Caroline, GMOs in the WTO: A Critique of the Panel’s Legal Reasoning in EC-Biotech, 7 (2006) *Melb. J. Int’l L.* 278–305
- Henderson, Wendy R./Murphy, Elaine C., Pest or Prized Possession? Genetically Modified Biocontrol from an International Perspective, 34 (2007) *Wildlife Research* 578–585
- Herfst, Sander/Schrauwen, Eefje J. A./Linster, Martin et al., Airborne Transmission of Influenza A/H5N1 Virus Between Ferrets, 336 (2012) *Science* 1534–1541
- Hess, Burkhardt, International Civil Litigation, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law, Online Edition* (Oxford University Press, Oxford 2008 et seq.)
- Hill, Ryan, Risk Assessment and Risk Management, in: Marie-Claire Cordonier Segger/Frederic Perron-Welch/Christine Frison (eds.), *Legal Aspects of Implementing the Cartagena Protocol on Biosafety* (Cambridge University Press, Cambridge 2013), 63–77
- Hillgenberg, Hartmut, A Fresh Look at Soft Law, 10 (1999) *European Journal of International Law* 499–515

- Hindman, Amy/Lefebvre, René, 4. International/Civil Liability and Compensation: General Developments, 19 (2008) YB Int'l Env. L. 214–222
- International/Civil Liability and Compensation: General Developments, 21 (2010) YB Int'l Env. L. 178–187
- Hiraizumi, Yuichiro./Crow, James F., Heterozygous Effects on Viability, Fertility, Rate of Development, and Longevity of *Drosophila* Chromosomes that Are Lethal When Homozygous, 45 (1960) Genetics 1071–1083
- Hirakawa, Matthew P./Krishnakumar, Raga/Timlin, Jerilyn A./Carney, James P./Butler, Kimberly S., Gene Editing and CRISPR in the Clinic: Current and Future Perspectives, 40 (2020) Bioscience Reports
- Hochkirch, Axel/Beninde, Joscha/Fischer, Marietta et al., License to Kill?: Disease Eradication Programs May Not Be in Line with the Convention on Biological Diversity, 11 (2018) Conservation Letters e12370
- Hoermann, Astrid/Tapanelli, Sofia/Capriotti, Paolo et al., Converting Endogenous Genes of the Malaria Mosquito into Simple Non-Autonomous Gene Drives for Population Replacement, 10 (2021) eLife e58791
- Hoffman, Kenneth B., State Responsibility in International Law and Transboundary Pollution Injuries, 25 (1976) ICLQ 509–542
- Hokanson, Karen E., When Policy Meets Practice: The Dilemma for Guidance on Risk Assessment Under the Cartagena Protocol on Biosafety, 7 (2019) Front. Bioeng. & Biotechnol. 82
- Holmes, Thomas P./Adamowicz, Wiktor L./Carlsson, Fredrik, Choice Experiments, in: Patricia A. Champ/Kevin J. Boyle/Thomas C. Brown (eds.), A Primer on Non-market Valuation (2nd ed., Springer Nature, Dordrecht 2017), 133–186
- Hoogh, André J.J. de, Articles 4 and 8 of the 2001 ILC Articles on State Responsibility, the Tadić Case and Attribution of Acts of Bosnian Serb Authorities to the Federal Republic of Yugoslavia, 72 (2002) BYIL 255–292
- Horbach, N.L.J.T., The Confusion About State Responsibility and International Liability, 4 (1991) Leiden J. Int'l L. 47–74
- Horvath, Philippe/Coûté-Monvoisin, Anne-Claire/Boyaval, Patrick/Fremaux, Christophe/Barrangou, Rodolphe, Comparative Analysis of CRISPR Loci in Lactic Acid Bacteria Genomes, 131 (2009) International Journal of Food Microbiology 62–70
- Horvath, Philippe/Gasiunas, Giedrius et al., Applications of the Versatile CRISPR-Cas Systems, in: Rodolphe Barrangou/John van der Oost (eds.), CRISPR-Cas Systems. RNA-Mediated Adaptive Immunity in Bacteria and Archaea (Springer, Heidelberg/New York 2013), 267–286
- Horváthy, Balázs, New Impulses: Aarhus Convention and Genetically Modified Organisms, in: Hanna Müllerová (ed.), Public Participation in Environmental Decision-Making: Implementation of the Aarhus Convention (Institute of State and Law of the Academy of Sciences of the Czech Republic, Prague 2013), 29–52
- Howe, Robert/Horn, Henrik, European Communities – Measures Affecting the Approval and Marketing of Biotech Products, 8 (2009) World Trade Review 49–83

- Hsu, Patrick D./Lander, Eric S./Zhang, Feng, Development and Applications of CRISPR-Cas9 for Genome Engineering, 157 (2014) *Cell* 1262–1278
- Huang, He/Zheng, Guosong/Jiang, Weibong/Hu, Haifeng/Lu, Yinhua, One-Step High-Efficiency CRISPR/Cas9-Mediated Genome Editing in *Streptomyces*, 47 (2015) *Acta Biochimica et Biophysica Sinica* 231–243
- Huang, Sanwen/Weigel, Detlef/Beachy, Roger N./Li, Jiayang, A Proposed Regulatory Framework for Genome-Edited Crops, 48 (2016) *Nature Genetics* 109–111
- Huguenin, Michael T./Donlan, Michael C. et al., Assessment and Valuation of Damage to the Environment, in: Cymie R. Payne/Peter H. Sand (eds.), *Gulf War Reparations and the UN Compensation Commission*. Environmental Liability (Oxford University Press, Oxford/New York 2011), 67–94
- Husby, Jan, Definitions of GMO/LMO and Modern Biotechnology, in: Terje Traavik/Li C. Lim (eds.), *Biosafety First. Holistic Approaches to Risk and Uncertainty in Genetic Engineering and Genetically Modified Organisms* (Tapir Academic Press, Trondheim 2009), 365–373
- Hussain, Amjad/Ding, Xiao/Alarqi, Muna et al., Herbicide Resistance: Another Hot Agronomic Trait for Plant Genome Editing, 10 (2021) *Plants* 621
- Institut de Droit International*, Responsibility and Liability Under International Law for Environmental Damage: Resolution Adopted on September 4, 1997, 37 *ILM* 1474
- International Commission of Jurists*, The Right to a Remedy and Reparation for Gross Human Rights Violations: A Practitioners' Guide, Revised Edition (2018), available at: <https://www.icj.org/wp-content/uploads/2018/11/Universal-Right-to-a-Remedy-Publications-Reports-Practitioners-Guides-2018-ENG.pdf> (last accessed 28 May 2022)
- International Court of Justice*, Declarations Recognizing the Jurisdiction of the Court as Compulsory, available at: <http://www.icj-cij.org/en/declarations> (last accessed 28 May 2022)
- International Institute for Sustainable Development*, Report of the Fourth Session of the Ad Hoc Working Group on Biosafety: 5–13 February 1998, ENB Vol. 9 No. 85 (1998), available at: <http://enb.iisd.org/download/pdf/enb0985e.pdf> (last accessed 28 May 2022)
- Highlights of BSWG-5 #9: Wednesday, 26 August 1998, ENB Vol. 9 No. 106 (1998), available at: <http://enb.iisd.org/download/pdf/enb09106e.pdf>
- Report of the Sixth Session of the Open-Ended Ad Hoc Working Group on Biosafety and the First Extraordinary Session of the CBD Conference of the Parties: 14–23 February 1999, ENB Vol. 9 No. 117 (1999), available at: <http://enb.iisd.org/download/pdf/enb09117e.pdf> (last accessed 28 May 2022)
- First Meeting of the Intergovernmental Committee for the Cartagena Protocol on Biosafety: 11–15 December 2000, ENB Vol. 9 No. 173 (2000), available at: <http://enb.iisd.org/archive/download/pdf/enb09173e.pdf> (last accessed 28 May 2022)

- Summary of the Fifth Meeting of the Open-Ended Ad Hoc Working Group on Liability and Redress in the Context of the Cartagena Protocol on Biosafety: 12–19 March 2008, ENB Vol. 9 No. 345 (2008), available at: <http://enb.iisd.org/download/pdf/enb09435e.pdf> (last accessed 28 May 2022)
- Summary of the Fourth Meeting of the Parties to the Cartagena Protocol on Biosafety: 12–16 May 2008, ENB Vol. 9 No. 441 (2008), available at: <http://enb.iisd.org/download/pdf/enb09441e.pdf> (last accessed 28 May 2022)
- Summary of the First Meeting of the Group of Friends of the Co-Chairs on Liability and Redress in the Context of the Cartagena Protocol on Biosafety: 23–27 February 2009, ENB Vol. 9 No. 457 (2009), available at: <http://enb.iisd.org/download/pdf/enb09457e.pdf> (last accessed 28 May 2022)
- Friends of the Co-Chairs Highlights: Monday, 8 February 2010, ENB Vol. 9 No. 491 (2010), available at: <http://enb.iisd.org/download/pdf/enb09491e.pdf> (last accessed 28 May 2022)
- Summary of the Second Meeting of the Group of Friends of the Co-Chairs on Liability and Redress in the Context of the Cartagena Protocol on Biosafety: 8–12 February 2010, ENB Vol. 9 No. 495 (2010), available at: <http://enb.iisd.org/download/pdf/enb09495e.pdf> (last accessed 28 May 2022)
- Summary of the UN Biodiversity Conference: 2–17 December 2016, ENB Vol. 9 No. 678 (2016), available at: <https://enb.iisd.org/download/pdf/enb09678e.pdf> (last accessed 28 May 2022)
- Earth Negotiations Bulletin, Volume 09: Biological Diversity and Plant Genetic Resources (19 December 2017), available at: <http://enb.iisd.org/vol09/> (last accessed 28 May 2022)
- UN Biodiversity Conference Highlights: Sunday, 18 November 2018, ENB Vol. 9 No. 716 (2018), available at: <https://enb.iisd.org/download/pdf/enb09716e.pdf> (last accessed 28 May 2022)
- Summary of the UN Biodiversity Conference: 13–29 November 2018, ENB Vol. 9 No. 725 (2018), available at: <https://enb.iisd.org/download/pdf/enb09725e.pdf> (last accessed 28 May 2022)
- International Law Association*, International Law on Biotechnology: Draft Final Report and Draft Final Recommendations (2010), available at: <https://ila.vettoreweb.com/Storage/Download.aspx?DbStorageId=1168&StorageFileGuid=b1a0a676-2f01-4b8e-92ba-103076a7de6b> (last accessed 28 May 2022)
- ILA Study Group on Due Diligence in International Law: First Report (2014), available at: <https://ila.vettoreweb.com/Storage/Download.aspx?DbStorageId=1429&StorageFileGuid=fd770a95-9118-4a20-ac61-df12356f74d0> (last accessed 28 May 2022)
- ILA Study Group on Due Diligence in International Law: Second Report (2016), available at: <https://ila.vettoreweb.com/Storage/Download.aspx?DbStorageId=1427&StorageFileGuid=ed229726-4796-47f2-b891-8cfa221685f> (last accessed 28 May 2022)
- International Monetary Fund*, SDR Valuation (27 May 2022), available at: https://www.imf.org/external/np/fin/data/rms_sdrv.aspx (last accessed 28 May 2022)

- International Plant Protection Convention*, Overview on International Standards for Phytosanitary Measures (ISPMs) And Their Application to Living Modified Organisms (LMOs) (2016), available at: https://www.ippc.int/static/media/uploads/ippc_ispmsforlmos_2016-02-24.pdf (last accessed 28 May 2022)
- International Service for the Acquisition of Agri-Biotech Applications*, Global Status of Commercialized Biotech/GM Crops in 2019, ISAAA Brief 55 (2019), available at: <https://www.isaaa.org/resources/publications/briefs/55/> (last accessed 28 May 2022)
- International Union for Conservation of Nature and Natural Resources*, Guidelines for the Prevention of Biodiversity Loss Caused by Alien Invasive Species (2002), available at: <https://portals.iucn.org/library/efiles/documents/Rep-2000-052.pdf> (last accessed 28 May 2022)
- Ishino, Yoshizumi/Shinagawa, Hideo/Makino, Kozo/Amemura, Mitsuko/Nakata, Atsuo*, Nucleotide Sequence of the *iap* Gene, Responsible for Alkaline Phosphatase Isozyme Conversion in *Escherichia Coli*, and Identification of the Gene Product, 169 (1987) *Journal of Bacteriology* 5429–5433
- Island Conservation*, The Genetic Biocontrol of Invasive Rodents (GBIRd) Program, available at: <http://www.geneticbiocontrol.org/> (last accessed 28 May 2022)
- Israel, Brian D./Martin, Jean et al.*, Legal Obstacles for Contingent Valuation Methods in Environmental Litigation, in: Kenneth Train/Daniel McFadden (eds.), *Contingent Valuation of Environmental Goods: A Comprehensive Critique* (Edward Elgar, Cheltenham 2017), 292–306
- Ito, Junitsu/Ghosh, Anil/Moreira, Luciano A./Wimmer, Ernst A./Jacobs-Lorena, Marcelo*, Transgenic Anopheline Mosquitoes Impaired in Transmission of a Malaria Parasite, 417 (2002) *Nature* 452
- Jabbar, Abdul/Zulfiqar, Farheen/Mahnoor, Mahnoor et al.*, Advances and Perspectives in the Application of CRISPR-Cas9 in Livestock, 63 (2021) *Molecular Biotechnology* 757–767
- Jacinto, Filipe V./Link, Wolfgang/Ferreira, Bibiana I.*, CRISPR/Cas9-Mediated Genome Editing: From Basic Research to Translational Medicine, 24 (2020) *Journal of Cellular and Molecular Medicine* 3766–3778
- Jackson, D. A./Symons, R. H./Berg, P.*, Biochemical Method for Inserting New Genetic Information into DNA of Simian Virus 40: Circular SV40 DNA Molecules Containing Lambda Phage Genes and the Galactose Operon of *Escherichia Coli*, 69 (1972) *PNAS* 2904–2909
- Jackson, Lee Ann*, Risk Assessment Frameworks in the Multilateral Setting, in: Stuart Smyth/Peter Phillips/David Castle (eds.), *Handbook on Agriculture, Biotechnology and Development* (Edward Elgar, Cheltenham 2014), 203–216
- Jacur Romanin, Francesca*, Triggering Non-Compliance Procedures, in: Tullio Treves/Laura Pineschi et al. (eds.), *Non-Compliance Procedures and Mechanisms and the Effectiveness of International Environmental Agreements* (T.M.C. Asser Press, The Hague 2009), 373–387
- Jaffe, Gregory*, Implementing the Cartagena Biosafety Protocol Through National Biosafety Regulatory Systems: An Analysis of Key Unresolved Issues, 5 (2005) *Journal of Public Affairs* 299–311

- Crafting National Biosafety Systems, in: Marie-Claire Cordonier Segger/Fred-
eric Perron-Welch/Christine Frison (eds.), *Legal Aspects of Implementing the
Cartagena Protocol on Biosafety* (Cambridge University Press, Cambridge
2013), 48–59
- Jagota, S. P.*, State Responsibility: Circumstances Precluding Wrongfulness, 16
(1985) NYL 249
- James, Stephanie/Collins, Frank H./Welkhoff, Philip A.* et al., Pathway to Deployment
of Gene Drive Mosquitoes as a Potential Biocontrol Tool for Elimination
of Malaria in Sub-Saharan Africa: Recommendations of a Scientific Working
Group, 98 (2018) *Am. J. Trop. Med. Hyg.* 1–49
- James, Stephanie/Tountas, Karen*, Using Gene Drive Technologies to Control Vector-
Borne Infectious Diseases, 10 (2018) *Sustainability* 4789
- Janzen, F. J./Phillips, P. C.*, Exploring the Evolution of Environmental Sex Determi-
nation, Especially in Reptiles, 19 (2006) *Journal of Evolutionary Biology* 1775–
1784
- Jenks, C. Wilfried*, Liability for Ultra-Hazardous Activities in International Law, 117
(1966) RdC 99–200
- Jennings, Robert/Watts, Arthur*, *Oppenheim's International Law* (9th ed., Longman,
Harlow 1992)
- Jensen, Eric Talbot*, The International Law Environmental Warfare: Active and
of Passive Damage During Armed Conflict, 38 (2005) *Vanderbilt Journal of
Transnational Law* 145–185
- Jeschke, Jonathan M./Keesing, Felicia/Ostfeld, Richard S.*, Novel Organisms: Compar-
ing Invasive Species, GMOs, and Emerging Pathogens, 42 (2013) *Ambio* 541–
548
- Jinek, Martin/Chylinski, Krzysztof/Fonfara, Ines* et al., A Programmable Dual-RNA–
Guided DNA Endonuclease in Adaptive Bacterial Immunity, 337 (2012) *Sci-
ence* 816–821
- Johnson, Barbara/Casagrande, Rocco*, Comparison of International Guidance for
Biosafety Regarding Work Conducted at Biosafety Level 3 (BSL-3) And Gain-of-
Function (GOF) Experiments, 21 (2016) *Appl. Biosaf.* 128–141
- Johnson, Durward/Kraska, James*, Some Synthetic Biology May Not Be Covered
by the Biological Weapons Convention (18 May 2020), available at: [https://
www.lawfareblog.com/some-synthetic-biology-may-not-be-covered-biological-
weapons-convention](https://www.lawfareblog.com/some-synthetic-biology-may-not-be-covered-biological-weapons-convention) (last accessed 28 May 2022)
- Johnson, Michael*, Liability for Environmental Damage in Antarctica: The Adoption
of Annex VI to the Antarctic Environment Protocol, 19 (2006) *Geo. Int'l Envntl.
L. Rev.* 33–55
- Jorasch, Petra*, Will the EU Stay Out of Step with Science and the Rest of the World
on Plant Breeding Innovation?, 39 (2020) *Plant Cell Reports* 163–167
- Jorgensen, Nina H. B.*, A Reappraisal of Punitive Damages in International Law, 68
(1998) *BYIL* 247–266

- Jouanin, Aurelie/Gilissen, Luud J. W. J./Schaart, Jan G. et al.*, CRISPR/Cas9 Gene Editing of Gluten in Wheat to Reduce Gluten Content and Exposure—Reviewing Methods to Screen for Coeliac Safety, 7 (2020) *Frontiers in Nutrition* 51
- Joung, J. Keith/Sander, Jeffry D.*, TALENs: A Widely Applicable Technology for Targeted Genome Editing, 14 (2013) *Nature Reviews Molecular Cell Biology* 49–55
- Jung, Christian/Capistrano-Gossmann, Gina/Braatz, Janina/Sashidhar, Niharika/Melzer, Siegbert*, Recent Developments in Genome Editing and Applications in Plant Breeding, 137 (2018) *Plant Breeding* 1–9
- Jungcurt, Stefan/Schabus, Nicole*, Liability and Redress in the Context of the Cartagena Protocol on Biosafety, 19 (2010) *RECIEL* 197–206
- Jusoh, Sufian*, Harmonisation of Liability Rules in Transboundary Movement of Biotechnology Crops (Centre for International Trade and Investment, Kuala Lumpur 2012)
- Kadner Graziano, Thomas/Erhardt, Matthias*, Cross-Border Damage Caused by Genetically Modified Organisms: Jurisdiction and Applicable Law, in: Bernhard A. Koch (ed.), *Damage Caused by Genetically Modified Organisms. Comparative Survey of Redress Options for Harm to Persons, Property or the Environment* (De Gruyter, Berlin/New York 2010), 784–812
- Kahrmann, Jens/Bömeke, Olivia/Leggewie, Georg*, Aged GMO Legislation Meets New Genome Editing Techniques, 15 (2017) *EurUP* 176–182
- Kahrmann, Jens/Leggewie, Georg*, CJEU's Ruling Makes Europe's GMO Legislation Ripe for Reformation, 16 (2018) *EurUP* 497–504
- Kaiser, Karen*, Treaties, Direct Applicability, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Kanchiswamy, Chidananda Nagamangala/Malnoy, Mickael/Velasco, Riccardo/Kim, Jin-Soo/Viola, Roberto*, Non-GMO Genetically Edited Crop Plants, 33 (2015) *Trends in Biotechnology* 489–491
- Kang, Xiangjin/He, Wenyin/Huang, Yuling et al.*, Introducing Precise Genetic Modifications into Human 3PN Embryos by CRISPR/Cas-Mediated Genome Editing, 33 (2016) *Journal of Assisted Reproduction and Genetics* 581–588
- Kaye, David*, Report of the Special Rapporteur on the Promotion and Protection of the Right to Freedom of Opinion and Expression, UN Doc. A/75/261 (2020)
- Kazhdan, Daniel*, Precautionary Pulp: Pulp Mills and the Evolving Dispute Between International Tribunals over the Reach of the Precautionary Principle, 38 (2011) *ELQ* 527–552
- Keiper, Felicity/Atanassova, Ana*, Regulation of Synthetic Biology: Developments Under the Convention on Biological Diversity and Its Protocols, 8 (2020) *Front. Bioeng. & Biotechnol.* 310
- Kelle, Alexander*, Prohibiting Chemical & Biological Weapons: Multilateral Regimes and Their Evolution (Lynne Rienner Publishers, Boulder/London 2014)
- Kelsen, Hans*, *Principles of International Law* (Rinehart & Company, New York 1952)

- Kershen, Drew L., Legal Liability Issues in Agricultural Biotechnology, 44 (2004) Crop Science 456–463
- Kim, Sojung/Kim, Daesik/Cho, Seung Woo/Kim, Jungeun/Kim, Jin-Soo, Highly Efficient RNA-Guided Genome Editing in Human Cells via Delivery of Purified Cas9 Ribonucleoproteins, 24 (2014) Genome Research 1012–1019
- Kim, Y. G./Cha, J./Chandrasegaran, S., Hybrid Restriction Enzymes: Zinc Finger Fusions to Fok I Cleavage Domain, 93 (1996) PNAS 1156–1160
- Kindji, Kévine/Faure, Michael G., Assessing Reparation of Environmental Damage by the ICJ: A Lost Opportunity?, 57 (2019) QIL 5–33
- Kingsbury, Benedict, Indigenous Peoples, in: Rüdiger Wolfrum/Anne Peters (eds.), Max Planck Encyclopedia of Public International Law, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Kingsbury, Noël, Hybrid: The History and Science of Plant Breeding (Univ. of Chicago Press, Chicago 2009)
- Kinzelbach, Katrin, Introduction to the Study of Academic Freedom, in: Researching Academic Freedom. Guidelines and Sample Case Studies (FAU University Press, Erlangen 2020), 1–10
- Kinzelbach, Katrin/Saliba, Ilyas/Spannagel, Janika/Quinn, Robert, Free Universities: Putting the Academic Freedom Index into Action (2020), available at: https://www.gppi.net/media/KinzelbachEtAl_2020_Free_Universities.pdf (last accessed 28 May 2022)
- Kirgis, Frederic L., Standing to Challenge Human Endeavors that Could Change the Climate, 84 (1990) AJIL 525–530
- Kiss, Alexandre, Present Limits to the Enforcement of State Responsibility for Environmental Damage, in: Francesco Francioni/Tullio Scovazzi (eds.), International Responsibility for Environmental Harm (Graham & Trotman, London 1991), 3–14
- Kiss, Alexandre/Shelton, Dinah, International Environmental Law (3rd ed., Transnational Publ, Ardsley, NY 2004)
- Guide to International Environmental Law (Martinus Nijhoff, Boston 2007)
- Klabbers, Jan, Compliance Procedures, in: Daniel Bodansky/Jutta Brunnée/Ellen Hey (eds.), The Oxford Handbook of International Environmental Law (Oxford University Press, Oxford 2007)
- Treaties, Amendment and Revision, in: Rüdiger Wolfrum/Anne Peters (eds.), Max Planck Encyclopedia of Public International Law, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Klassen, W./Curtis, C. F., History of the Sterile Insect Technique, in: Victor A. Dyck/J. Hendrichs/A. S. Robinson (eds.), Sterile Insect Technique. Principles and Practice in Area-Wide Integrated Pest Management (Springer, Dordrecht Netherlands 2005), 3–36
- Klein, Eckart, Self-Contained Regime, in: Rüdiger Wolfrum/Anne Peters (eds.), Max Planck Encyclopedia of Public International Law, Online Edition (Oxford University Press, Oxford 2008 et seq.)

- Klein, T. A./Windbichler, N./Deredec, A./Burt, A./Benedict, M. Q., Infertility Resulting from Transgenic I-PpoI Male Anopheles Gambiae in Large Cage Trials, 106 (2012) *Pathogens and Global Health* 20–31
- Kleinheisterkamp, Jan, Recognition and Enforcement of Foreign Arbitral Awards, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Klug, William S./Cummings, Michael R./Spencer, Charlotte A./Palladino, Michael Angelo/Killian, Darrell, *Concepts of Genetics* (Pearson, Hoboken, New Jersey 2019)
- Knudsen, Guy R., International Deployment of Microbial Pest Control Agents: Falling Between the Cracks of the Convention on Biological Diversity and the Cartagena Biosafety Protocol, 30 (2012) *Pace Envtl. L. Rev.* 625–651
- Koch, Bernhard A., Damage Caused by GMOs: Comparative Analysis, in: *Damage Caused by Genetically Modified Organisms. Comparative Survey of Redress Options for Harm to Persons, Property or the Environment* (De Gruyter, Berlin/New York 2010), 882–942
- Koch, Bernhard A./Askeland, Bjarte (eds.), *Economic Loss Caused by Genetically Modified Organisms: Liability and Redress for the Adventitious Presence of GMOs in Non-GM Crops* (Springer, Vienna/New York 2008)
- Koester, Veit, The Compliance Mechanism of the Cartagena Protocol on Biosafety: Development, Adoption, Content, and First Years of Life, in: Marie-Claire Cordonier Segger/Frederic Perron-Welch/Christine Frison (eds.), *Legal Aspects of Implementing the Cartagena Protocol on Biosafety* (Cambridge University Press, Cambridge 2013), 164–187
- Kofler, Natalie, Gene Drives: Yelling Match Drowns Out Marginalized Voices, 565 (2019) *Nature* 25
- Why Were Scientists Silent over Gene-Edited Babies?, 566 (2019) *Nature* 427
- Kofler, Natalie/Collins, James P./Kuzma, Jennifer et al., Editing Nature: Local Roots of Global Governance, 362 (2018) *Science* 527–529
- Kohm, Katherine E., Shortcomings of the Cartagena Protocol: Resolving the Liability Loophole at an International Level, 27 (2009) *UCLA Journal of Environmental Law and Policy* 145–180
- Kojima, Kazunobu/Booth, Catherine Makison/Summermatter, Kathrin et al., Risk-Based Reboot for Global Lab Biosafety, 360 (2018) *Science* 260–262
- Kolopack, Pamela A./Lavery, James V., Informed Consent in Field Trials of Gene-Drive Mosquitoes, 1 (2017) *Gates Open Research* 14
- Komen, John, The Emerging International Regulatory Framework for Biotechnology, 3 (2012) *GM Crops & Food* 78–84
- Komor, Alexis C./Badran, Ahmed H./Liu, David R., CRISPR-Based Technologies for the Manipulation of Eukaryotic Genomes, 168 (2017) *Cell* 20–36
- Koonin, Eugene V./Makarova, Kira S./Zhang, Feng, Diversity, Classification and Evolution of CRISPR-Cas Systems, 37 (2017) *Current Opinion in Microbiology* 67–78

- Koskenniemi, Martti*, Fragmentation of International Law: Difficulties Arising from the Diversification and Expansion of International Law: Report of the Study Group of the International Law Commission, UN Doc. A/CN.4/L.682 (2006)
- Krenek, Pavel/Samajova, Olga/Luptovciak, Ivan* et al., Transient Plant Transformation Mediated by *Agrobacterium Tumefaciens*: Principles, Methods and Applications, 33 (2015) *Biotechnology Advances* 1024–1042
- Kuiken, T./Dana, G./Oye, K./Rejeski, D.*, Shaping Ecological Risk Research for Synthetic Biology, 4 (2014) *Journal of Environmental Studies and Sciences* 191–199
- Kuiken, Todd*, DARPA's Synthetic Biology Initiatives Could Militarize the Environment: Is that Something We're Comfortable with? (28 March 2018), available at: http://www.slate.com/articles/technology/future_tense/2017/05/what_happens_if_darpa_uses_synthetic_biology_to_manipulate_mother_nature.html (last accessed 28 May 2022)
- Kulesza, Joanna*, Due Diligence in International Law (Brill Nijhoff, Leiden 2016)
- Kumar, Manoj/Yadav, Ashok Kumar/Verma, Vinod* et al., Bioengineered Probiotics as a New Hope for Health and Diseases: An Overview of Potential and Prospects, 11 (2016) *Future Microbiology* 585–600
- Kummer Peiry, Katharina*, Transboundary Movement of Hazardous Waste and Chemicals, in: André Nollkaemper/Ilias Plakokefalos et al. (eds.), *The Practice of Shared Responsibility in International Law* (Cambridge University Press, Cambridge 2017), 936–961
- Kuzma, Jennifer*, Procedurally Robust Risk Assessment Framework for Novel Genetically Engineered Organisms and Gene Drives, 15 (2021) *Regulation & Governance* 1144–1165
- Kyrou, Kyros/Hammond, Andrew M./Galizi, Roberto* et al., A CRISPR–Cas9 Gene Drive Targeting *Doublesex* Causes Complete Population Suppression in Caged *Anopheles Gambiae* Mosquitoes, 36 (2018) *Nature Biotech.* 1062
- La Fayette, Louise de*, The ILC and International Liability: A Commentary, 6 (1997) *RECIEL* 322–334
- La Vina, Antonio/Fransen, Lindsey*, Integrating Socio-Economic Considerations into Biosafety Decisions: The Challenge for Asia (2004), available at: <https://www.wri.org/publication/integrating-socio-economic-considerations-biosafety-decisions-0> (last accessed 28 May 2022)
- Lago Candeira, Alejandro*, Administrative Approach to Liability: Its Origin, Negotiation and Outcome, in: Akiho Shibata (ed.), *International Liability Regime for Biodiversity Damage. The Nagoya-Kuala Lumpur Supplementary Protocol* (Taylor & Francis, London 2014), 92–104
- Lai, Hung-En/Canavan, Caoimhe/Cameron, Loren* et al., Synthetic Biology and the United Nations, 37 (2019) *Trends in Biotechnology* 1146–1151
- Laible, Götz/Wei, Jingwei/Wagner, Stefan*, Improving Livestock for Agriculture: Technological Progress from Random Transgenesis to Precision Genome Editing Heralds a New Era, 10 (2015) *Biotechnology Journal* 109–120
- Lammers, Johan G.*, *Pollution of International Watercourses: A Search for Substantive Rules and Principles of Law* (Nijhoff, Boston 1984)

- International Responsibility and Liability for Damage Caused by Environmental Interferences, 31 (2001) *Environmental Policy and Law* 42–50 and 94–105
- Lande, Russell*, Anthropogenic, Ecological and Genetic Factors in Extinction and Conservation, 40 (1998) *Researches on Population Ecology* 259–269
- Lander, Eric S.*, The Heroes of CRISPR, 164 (2016) *Cell* 18–28
- Lanphier, Edward/Urnov, Fyodor/Haecker, Sarah Ehlen/Werner, Michael/Smolenski, Joanna*, Don't Edit the Human Germ Line, 519 (2015) *Nature News* 410
- Lareau, Caleb A./Clement, Kendell/Hsu, Jonathan Y. et al.*, Response to “Unexpected Mutations After CRISPR-Cas9 Editing in Vivo”, 15 (2018) *Nature Methods* 238–239
- Larracuenta, Amanda M./Presgraves, Daven C.*, The Selfish Segregation Distorter Gene Complex of *Drosophila Melanogaster*, 192 (2012) *Genetics* 33–53
- Latty, Franck*, Actions and Omissions, in: James Crawford/Alain Pellet/Simon Olleson (eds.), *The Law of International Responsibility* (Oxford University Press, Oxford 2010), 355–363
- Lauterpacht, Elihu/Nevill, Penelope*, The Different Forms of Reparation: Interest, in: James Crawford/Alain Pellet/Simon Olleson (eds.), *The Law of International Responsibility* (Oxford University Press, Oxford 2010), 613–655
- Lawrence, Eleanor* (ed.), *Henderson's Dictionary of Biology* (16th ed., Pearson, Harlow 2016)
- Ledford, Heidi*, Alternative CRISPR System Could Improve Genome Editing, 526 (2015) *Nature News* 17
- CRISPR, the Disruptor, 522 (2015) *Nature* 20–24
- The Unsung Heroes of CRISPR, 535 (2016) *Nature News* 342
- CRISPR Deployed to Combat Sickle-Cell Anaemia, *Nature News*, 12 October 2016, available at: <https://www.nature.com/news/crispr-deployed-to-combat-sickle-cell-anaemia-1.20782> (last accessed 28 May 2022)
- Geneticists Enlist Engineered Virus and CRISPR to Battle Citrus Disease, 545 (2017) *Nature News* 277
- CRISPR Gene Therapy Shows Promise Against Blood Diseases, 588 (2020) *Nature* 383
- CRISPR Treatment Inserted Directly into the Body for First Time, 579 (2020) *Nature* 185
- Lee, Maria*, *EU Regulation of GMOs: Law and Decision Making for a New Technology* (Edward Elgar, Cheltenham/Northampton 2008)
- Lefebvre, René*, *Transboundary Environmental Interference and the Origin of State Liability* (Kluwer Law International, The Hague 1996)

- Creative Legal Engineering, 13 (2000) *Leiden Journal of International Law* 1–9
- The Legal Significance of the Supplementary Protocol: The Result of a Paradigm Evolution, in: Akiho Shibata (ed.), *International Liability Regime for Biodiversity Damage. The Nagoya-Kuala Lumpur Supplementary Protocol* (Taylor & Francis, London 2014), 73–91
- Lefeber, René/Nieto Carrasco, Jimena, Negotiating the Supplementary Protocol: The Co-Chairs' Perspective, in: Akiho Shibata (ed.), *International Liability Regime for Biodiversity Damage. The Nagoya-Kuala Lumpur Supplementary Protocol* (Taylor & Francis, London 2014), 52–70
- Lentzos, Filippa, WHO: COVID-19 Didn't Leak from a Lab. Also WHO: Maybe It Did, *Bulletin of the Atomic Scientists*, 11 November 2021, available at: <https://thebulletin.org/2021/02/who-covid-19-didnt-leak-from-a-lab-also-who-maybe-it-did/> (last accessed 28 May 2022)
- Lentzos, Filippa/Reeves, R. Guy, Scientists Are Working on Vaccines that Spread Like a Disease. What Could Possibly Go Wrong?, *Bulletin of the Atomic Scientists*, 18 September 2020, available at: <https://thebulletin.org/2020/09/scientists-a-re-working-on-vaccines-that-spread-like-a-disease-what-could-possibly-go-wrong/> (last accessed 28 May 2022)
- Lentzos, Filippa/Rybicki, Edward P./Engelhard, Margret et al., Eroding Norms over Release of Self-Spreading Viruses, 375 (2022) *Science* 31–33
- Lenzerini, Federico, Biotechnology, Human Dignity and the Human Genome, in: Francesco Francioni/Tullio Scovazzi (eds.), *Biotechnology and International Law* (Hart, Oxford 2006), 285–340
- Leopoldina Nationale Akademie der Wissenschaften/Deutsche Forschungsgemeinschaft/Union der deutschen Akademien der Wissenschaften, *The Opportunities and Limits of Genome Editing* (Halle (Saale) 2015), available at: https://www.leopoldina.org/uploads/tx_leopublication/2015_3Akad_Stellungnahme_Genome_Editing.pdf (last accessed 28 May 2022)
- Lewandowsky, Stephan/Jacobs, Peter/Neil, Stuart, Conspiracy Theories Made It Harder for Scientists to Seek the Truth, 326 (2022) *Scientific American* 72–77
- Lewis, Renee, Bikinians Evacuated 'For Good of Mankind' Endure Lengthy Nuclear Fallout, *Al Jazeera America*, 28 July 2015, available at: <http://america.aljazeera.com/articles/2015/7/28/bikini-nuclear-test-survivors-demand-compensation.html> (last accessed 28 May 2022)
- Lewontin, Richard Charles, The Units of Selection, 1 (1970) *Annual Review of Ecology and Systematics* 1–18
- Li, Fang/Scott, Maxwell J., CRISPR/Cas9-Mediated Mutagenesis of the White and Sex Lethal Loci in the Invasive Pest, *Drosophila Suzukii*, 469 (2016) *Biochemical and Biophysical Research Communications* 911–916
- Li, Ling/He, Zhi-Yao/Wei, Xia-Wei/Gao, Guang-Ping/Wei, Yu-Quan, Challenges in CRISPR/CAS9 Delivery: Potential Roles of Nonviral Vectors, 26 (2015) *Human Gene Therapy* 452–462

- Liang, Puping/Xu, Yanwen/Zhang, Xiya et al.*, CRISPR/Cas9-Mediated Gene Editing in Human Trippronuclear Zygotes, 6 (2015) Protein & Cell 363–372
- Lim, Li Ching/Lim, Li Lin*, Gene Drives: Legal and Regulatory Issues (Third World Network, Penang (Malaysia) 2019)
- Lim, Poh Lian/Kurup, Asok/Gopalakrishna, Gowri et al.*, Laboratory-Acquired Severe Acute Respiratory Syndrome, 350 (2004) N. Engl. J. Med. 1740–1745
- Lim Tung, Odile Juliette*, Genetically Modified Organisms and Transboundary Damage: A Two-Pronged Compromise for Redress Under the Liability and Redress Protocol to the Cartagena Protocol, 38 (2013) SAYIL 67–91
- Transboundary Movements of Genetically Modified Organisms and the Cartagena Protocol: Key Issues and Concerns, 17 (2014) Potchefstroom Electronic Law Journal 1739
- Lima, Rodrigo C. A.*, Trade and the Supplementary Protocol: How to Achieve Mutual Supportiveness, in: Akiho Shibata (ed.), International Liability Regime for Biodiversity Damage. The Nagoya-Kuala Lumpur Supplementary Protocol (Taylor & Francis, London 2014), 131–149
- Lin, Steven/Staahl, Brett T./Alla, Ravi K./Doudna, Jennifer A.*, Enhanced Homology-Directed Human Genome Engineering by Controlled Timing of CRISPR/Cas9 Delivery, 3 (2014) eLife e04766
- Lindroos, A.*, Dispelling the Chimera of 'Self-Contained Regimes' International Law and the WTO, 16 (2005) EJIL 857–877
- Lipton, Joshua/LeJeune, Kate*, Determining and Quantifying Environmental Damage, in: Joshua Lipton/Ece Özdemiroğlu et al. (eds.), Equivalency Methods for Environmental Liability (Springer Netherlands, Dordrecht 2018), 57–88
- Liu, Jing*, Compensating Ecological Damage: Comparative and Economic Observations (Intersentia, Cambridge 2013)
- Lockwood, Jeffrey A.*, Insects as Weapons of War, Terror, and Torture, 57 (2012) Annual Review of Entomology 205–227
- Ludlow, Karinne/Smyth, Stuart J./Falck-Zepeda, José B.*, Introduction to Socio-Economic Considerations in the Regulation of Genetically Modified Organisms, in: Socio-Economic Considerations in Biotechnology Regulation (Springer, New York, NY 2014), 3–14
- Lunshof, Jeantine E./Birnbaum, Angela*, Adaptive Risk Management of Gene Drive Experiments, 22 (2017) Appl. Biosaf. 97–103
- Luo, Ming/Gilbert, Brian/Ayliffe, Michael*, Applications of CRISPR/Cas9 Technology for Targeted Mutagenesis, Gene Replacement and Stacking of Genes in Higher Plants, 35 (2016) Plant Cell Reports 1439–1450
- Lusser, Maria/Davies, Howard V.*, Comparative Regulatory Approaches for Groups of New Plant Breeding Techniques, 30 (2013) New Biotechnology 437–446
- Lusser, Maria/Parisi, Claudia/Plan, Damien/Rodríguez-Cerezo, Emilio*, New Plant Breeding Techniques: State-of-the-Art and Prospects for Commercial Development (2011), available at: <https://publications.jrc.ec.europa.eu/repository/bitstream/JRC63971/jrc63971.pdf> (last accessed 28 May 2022)

- Lyttle, Terence W., Cheaters Sometimes Prosper: Distortion of Mendelian Segregation by Meiotic Drive, 9 (1993) *Trends in Genetics* 205–210
- Ma, Hong/Marti-Gutierrez, Nuria/Park, Sang-Wook et al., Correction of a Pathogenic Gene Mutation in Human Embryos, 548 (2017) *Nature* 413
- Ma, Sanyuan/Zhang, Shengling/Wang, Feng et al., Highly Efficient and Specific Genome Editing in Silkworm Using Custom TALENs, 7 (2012) *PLOS ONE* e45035
- Mačák, Kubo, Decoding Article 8 of the International Law Commission's Articles on State Responsibility: Attribution of Cyber Operations by Non-State Actors, 21 (2016) *Journal of Conflict and Security Law* 405–428
- MacAlister Elliott and Partners Ltd/Economics for the Environment Consultancy Ltd, Study on the Valuation and Restoration of Damage to Natural Resources for the Purpose of Environmental Liability, Report for the European Commission, Directorate-General Environment, B4–3040/2000/265781/MAR/B3 (2001), available at: https://ec.europa.eu/environment/legal/liability/pdf/biodiversity_main.pdf (last accessed 28 May 2022)
- Mackenzie, Ruth, Environmental Damage and Genetically Modified Organisms, in: Michael Bowman/Alan E. Boyle (eds.), *Environmental Damage in International and Comparative Law. Problems of Definition and Valuation* (Oxford University Press, Oxford/New York 2002), 63–84
- Mackenzie, Ruth/Burhenne-Guilmin, Françoise/La Viña, Antonio G.M./Werksman, Jacob D., *An Explanatory Guide to the Cartagena Protocol on Biosafety* (IUCN, Gland/Cambridge 2003)
- Mackenzie, Ruth/Sands, Philippe, Prospects for International Environmental Law, in: Christoph Bail/Robert Falkner/Helen Marquard (eds.), *The Cartagena Protocol on Biosafety. Reconciling Trade in Biotechnology with Environment and Development?* (Earthscan, London 2002), 457–466
- Mahmoudi, Said, Gut Dam Claims, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Mali, Prashant/Yang, Luhan/Esvelt, Kevin M. et al., RNA-Guided Human Genome Engineering via Cas9, 339 (2013) *Science* 823–826
- Maljean-Dubois, Sandrine, Biodiversité, biotechnologies, biosécurité: Le droit international désarticulé (2000) *Journal du Droit International* 947–994
- Malone, Linda A., The Chernobyl Accident: A Case Study in International Law Regulating State Responsibility for Transboundary Nuclear Pollution, 12 (1987) *Colum. J. Env'tl. L.* 203–241
- Mandal, Pankaj K./Ferreira, Leonardo M. R./Collins, Ryan et al., Efficient Ablation of Genes in Human Hematopoietic Stem and Effector Cells Using CRISPR/Cas9, 15 (2014) *Cell Stem Cell* 643–652
- Marceau, Gabrielle Zoe, Conflicts of Norms and Conflicts of Jurisdictions: The Relationship Between the WTO Agreement and MEAs and Other Treaties, 35 (2001) *Journal of World Trade* 1081–1131

- Margolis, Emanuel*, The Hydrogen Bomb Experiments and International Law, 64 (1955) Yale L.J. 629–647
- Mariani, Meredith T.*, The Intersection of International Law, Agricultural Biotechnology, and Infectious Disease (Martinus Nijhoff, Boston 2007)
- Marquard, Helen*, Scope, in: Christoph Bail/Robert Falkner/Helen Marquard (eds.), The Cartagena Protocol on Biosafety. Reconciling Trade in Biotechnology with Environment and Development? (Earthscan, London 2002), 289–298
- Marraffini, Luciano A.*, CRISPR-Cas Immunity in Prokaryotes, 526 (2015) Nature 55
- Marshall, John M.*, The Cartagena Protocol and Genetically Modified Mosquitoes, 28 (2010) Nature Biotech. 896–897
- Commentary: The Cartagena Protocol in the Context of Recent Releases of Transgenic and Wolbachia-Infected Mosquitoes, 19 (2011) Asia-Pacific Journal of Molecular Biology and Biotechnology 91–100
- The Cartagena Protocol and Releases of Transgenic Mosquitoes, in: Brij K. Tyagi (ed.), Training Manual: Biosafety for Human Health and the Environment in the Context of the Potential Use of Genetically Modified Mosquitoes (GMMs) (WHO, Geneva 2015), 163–177
- Marshall, John M./Akbari, Omar S.*, Gene Drive Strategies for Population Replacement, in: Zach N. Adelman (ed.), Genetic Control of Malaria and Dengue (Elsevier 2015), 169–200
- Marshall, John M./Buchman, Anna/Sanchez C, Hector M./Akbari, Omar S.*, Overcoming Evolved Resistance to Population-Suppressing Homing-Based Gene Drives, 7 (2017) Sci. Rep. 3776
- Marshall, John M./Taylor, Charles E.*, Malaria Control with Transgenic Mosquitoes, 6 (2009) PLOS Medicine e1000020
- Marshall Islands Nuclear Claims Tribunal* (11 June 2007), available at: <https://web.archive.org/web/20110716110909/http://www.nuclearclaimstribunal.com/> (last accessed 28 May 2022)
- Martignago, Damiano/Rico-Medina, Andrés/Blasco-Escámez, David/Fontanet-Manzanque, Juan B./Caño-Delgado, Ana I.*, Drought Resistance by Engineering Plant Tissue-Specific Responses, 10 (2019) Frontiers in Plant Science 1676
- Mason, Michael*, The Governance of Transnational Environmental Harm: Addressing New Modes of Accountability/Responsibility, 8 (2008) Global Environmental Politics 8–24
- Matz-Lück, Nele*, Biological Diversity, International Protection, in: Rüdiger Wolfrum/Anne Peters (eds.), Max Planck Encyclopedia of Public International Law, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Treaties, Conflict Clauses, in: Rüdiger Wolfrum/Anne Peters (eds.), Max Planck Encyclopedia of Public International Law, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Mbengue, Makane Moïse*, Preamble, in: Rüdiger Wolfrum/Anne Peters (eds.), Max Planck Encyclopedia of Public International Law, Online Edition (Oxford University Press, Oxford 2008 et seq.)

Bibliography

- McCaffrey, Stephen C., *The Law of International Watercourses* (Oxford University Press, Oxford 2019)
- McConnell, Fiona, *The Biodiversity Convention: A Negotiating History, A Personal Account of Negotiating the United Nations Convention on Biological Diversity – and After* (Kluwer Law International, London 1996)
- McConnell, Sean C./Blasimme, Alessandro, Ethics, Values, and Responsibility in Human Genome Editing, 21 (2019) *AMA Journal of Ethics* E1017–1020
- McDermott, Shannon R./Noor, Mohamed A. F., The Role of Meiotic Drive in Hybrid Male Sterility, 365 (2010) *Philos. Trans. R. Soc. B* 1265–1272
- McDonald, Neil, The Role of Due Diligence in International Law, 68 (2019) *ICLQ* 1041–1054
- McGarity, Thomas O., International Regulation of Deliberate Release Biotechnologies, in: Francesco Francioni/Tullio Scovazzi (eds.), *International Responsibility for Environmental Harm* (Graham & Trotman, London 1991), 319–361
- McGraw, Désirée M., The CBD – Key Characteristics and Implications for Implementation, 11 (2002) *RECIEL* 17–28
- McLean, Kirsty Galloway, Bridging the Gap Between Researchers and Policy-Makers: International Collaboration Through the Biosafety Clearing-House, 4 (2005) *Environmental Biosafety Research* 123–126
- McMeniman, Conor J./Lane, Roxanna V./Cass, Bodil N. et al., Stable Introduction of a Life-Shortening *Wolbachia* Infection into the Mosquito *Aedes Aegypti*, 323 (2009) *Science* 141–144
- McRae, Andrew D./Weijer, Charles/Binik, Ariella et al., Who Is the Research Subject in Cluster Randomized Trials in Health Research?, 12 (2011) *Trials* 183
- Meagher, Karen M./Allyse, Megan A./Master, Zubin/Sharp, Richard R., Reexamining the Ethics of Human Germline Editing in the Wake of Scandal, 95 (2020) *Mayo Clinic Proceedings* 330–338
- Mehravar, Maryam/Shirazi, Abolfazl/Nazari, Mahboobeh/Banan, Mehdi, Mosaicism in CRISPR/Cas9-Mediated Genome Editing, 445 (2019) *Developmental Biology* 156–162
- Meier, Benjamin Mason/Habibi, Roojin/Yang, Y. Tony, Travel Restrictions Violate International Law, 367 (2020) *Science* 1436
- Memorandum of Cooperation Between the Food and Agriculture Organization of the United Nations and the Secretariat of the Convention on Biological Diversity on Cooperation Between the Secretariat of the Convention on Biological Diversity and the Secretariat of the International Plant Protection Convention (25 February 2004), available at: https://www.ippc.int/static/media/files/partner_publication/2015/10/26/1287738124_m_of_c_-_cbd_-_fao_2013042321-19en_2013100412-10-67.12_KB.pdf (last accessed 28 May 2022)
- Mendel, Gregor, *Versuche über Pflanzen-Hybriden* (Experiments on Plant Hybrids), 4 (1866) *Verhandlungen des Naturforschenden Vereins zu Brünn* 3–47

- Meshel, Tamar*, Optional Rules for Arbitration of Disputes Relating to Natural Resources And/or the Environment, MPILux Working Paper 1 (2017), available at: https://www.mpi.lu/fileadmin/mpi/medien/research/MPEiPro/WPS1_2017_Meshel_Optional_Rules_for_Arbitration_of_Disputes_Relating_to_Natural_Reources.pdf (last accessed 28 May 2022)
- Michaels, Jan*, Recognition and Enforcement of Foreign Judgments, in: Rüdiger Wolfrum/Anne Peters (eds.), Max Planck Encyclopedia of Public International Law, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Midic, Uros/Hung, Pei-Hsuan/Vincent, Kailey A. et al.*, Quantitative Assessment of Timing, Efficiency, Specificity and Genetic Mosaicism of CRISPR/Cas9-Mediated Gene Editing of Hemoglobin Beta Gene in Rhesus Monkey Embryos, 26 (2017) Human Molecular Genetics 2678–2689
- Mihoub, Jean-Baptiste/Henle, Klaus/Titeux, Nicolas et al.*, Setting Temporal Baselines for Biodiversity: The Limits of Available Monitoring Data for Capturing the Full Impact of Anthropogenic Pressures, (2017) 7 Sci. Rep. 41591
- Milano, Enrico*, The Outcomes of the Procedure and Their Legal Effects, in: Tullio Treves/Laura Pineschi et al. (eds.), Non-Compliance Procedures and Mechanisms and the Effectiveness of International Environmental Agreements (T.M.C. Asser Press, The Hague 2009), 407–418
- Milanović, Marko*, Extraterritorial Application of Human Rights Treaties: Law, Principles and Policy (Oxford University Press, Oxford 2011)
- Milanović, Marko/Papić, Tatjana*, The Applicability of the ECHR in Contested Territories, 67 (2018) ICLQ 779–800
- Miles, Cameron A.*, Introductory Note to Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica v. Nicaragua)/Construction of a Road in Costa Rica Along the San Juan River (Nicaragua v. Costa Rica) (I.C.J.), 55 (2016) ILM 417
- Min, John/Smidler, Andrea L./Najjar, Devora/Esvelt, Kevin M.*, Harnessing Gene Drive, 5 (2018) Journal of Responsible Innovation S40
- Mitchell, Heidi J./Bartsch, Detlef*, Regulation of GM Organisms for Invasive Species Control, 7 (2020) Front. Bioeng. & Biotechnol. 927
- Mojica, Francisco J.M./Díez-Villaseñor, Chcsar/García-Martínez, Jesús/Soria, Elena*, Intervening Sequences of Regularly Spaced Prokaryotic Repeats Derive from Foreign Genetic Elements, 60 (2005) Journal of Molecular Evolution 174–182
- Monnheimer, Maria*, Due Diligence Obligations in International Human Rights Law (Cambridge University Press, Cambridge et al. 2021)
- Montgomery, Jacob S./Sadeque, Ahmed/Giacomini, Darci A./Brown, Patrick J./Tranel, Patrick J.*, Sex-Specific Markers for Waterhemp (*Amaranthus Tuberculatus*) and Palmer Amaranth (*Amaranthus Palmeri*), 67 (2019) Weed Science 412–418
- Montjoie, Michel*, The Concept of Liability in the Absence of an Internationally Wrongful Act, in: James Crawford/Alain Pellet/Simon Olleson (eds.), The Law of International Responsibility (Oxford University Press, Oxford 2010)

- Moreira, Luciano A./Iturbe-Ormaetxe, Iñaki/Jeffery, Jason A. et al., A Wolbachia Symbiont in *Aedes Aegypti* Limits Infection with Dengue, Chikungunya, and Plasmodium, 139 (2009) *Cell* 1268–1278
- Moreira, Luciano A./Saig, Emad/Turley, Andrew P. et al., Human Probing Behavior of *Aedes Aegypti* When Infected with a Life-Shortening Strain of Wolbachia, 3 (2009) *PLoS Neglected Tropical Diseases* e568
- Moscou, Matthew J./Bogdanove, Adam J., A Simple Cipher Governs DNA Recognition by TAL Effectors, 326 (2009) *Science* 1501
- Mout, Rubul/Ray, Moumita/Lee, Yi-Wei/Scaletti, Federica/Rotello, Vincent M., In Vivo Delivery of CRISPR/Cas9 for Therapeutic Gene Editing: Progress and Challenges, 28 (2017) *Bioconjugate Chemistry* 880–884
- Mukherjee, Siddhartha, *The Gene: An Intimate History* (Scribner, New York 2016)
- Muller, Hermann Joseph, Artificial Transmutation of the Gene, 66 (1927) *Science* 84–87
- Mullin, Emily, CRISPR 2.0 Is Here, and It's Way More Precise, MIT Technology Review, 25 October 2017, available at: <https://www.technologyreview.com/s/609203/crispr-20-is-here-and-its-way-more-precise/> (last accessed 28 May 2022)
- Munro, R. D./Lammers, Johan G. (eds.), *Environmental Protection and Sustainable Development: Legal Principles and Recommendations Adopted by the Experts Group on Environmental Law of the World Commission on Environment and Development* (Graham & Trotman, London 1987)
- Murase, Shinya, Third Report on the Protection of the Atmosphere, UN Doc. A/CN.4/692 (2015)
- Murphy, Aisling A./Redwood, Alec J./Jarvis, Michael A., Self-Disseminating Vaccines for Emerging Infectious Diseases, 15 (2016) *Expert Review of Vaccines* 31–39
- Murphy, Sean D., *Biotechnology and International Law*, 42 (2001) *Harv. Int'l L. J.* 47–139
- Murray, James/Bradley, Henry/Craigie, William A. et al., *Oxford English Dictionary*, Online Edition, available at: <http://www.oed.com/> (last accessed 28 May 2022)
- Myhr, Anne Ingeborg/Dalmo, Roy A., DNA Vaccines: Mechanisms and Aspects of Relevance for Biosafety, in: Terje Traavik/Li C. Lim (eds.), *Biosafety First. Holistic Approaches to Risk and Uncertainty in Genetic Engineering and Genetically Modified Organisms* (Tapir Academic Press, Trondheim 2009), 253–262
- Naeem, Muhammad/Majeed, Saman/Hoque, Mubasher Zahir/Abmad, Irsbad, Latest Developed Strategies to Minimize the Off-Target Effects in CRISPR-Cas-Mediated Genome Editing, 9 (2020) *Cells*
- National Academies of Sciences, Engineering, and Medicine (NASEM), *Gene Drives on the Horizon: Advancing Science, Navigating Uncertainty, and Aligning Research with Public Values* (The National Academies Press, Washington, D.C. 2016)
- Genetically Engineered Crops: Experiences and Prospects (The National Academies Press, Washington, DC 2016)

- Neff, Robyn, The Cartagena Protocol and the WTO: Will the EU Biotech Products Case Leave Room for the Protocol?, 16 (2005) Fordham Environmental Law Review 261–288
- Nejat, Naghmeh/Rookes, James/Mantri, Nitin L./Cabill, David M., Plant-Pathogen Interactions: Toward Development of Next-Generation Disease-Resistant Plants, 37 (2017) Critical Reviews in Biotechnology 229–237
- Nelson, Dolliver, Exclusive Economic Zone, in: Rüdiger Wolfrum/Anne Peters (eds.), Max Planck Encyclopedia of Public International Law, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Neuhaus, Carolyn P./Caplan, Arthur L., Ethical Lessons from a Tale of Two Genetically Modified Insects, 35 (2017) Nature Biotech. 713–716
- Nicklisch, Fritz, Rechtsfragen der modernen Bio- und Gentechnologie: Regelungsbedarf und Regelungsansätze, 44 (1989) Betriebs-Berater 1–10
- Nie, Jing-Bao, In the Shadow of Biological Warfare: Conspiracy Theories on the Origins of COVID-19 and Enhancing Global Governance of Biosafety as a Matter of Urgency, 17 (2020) Bioethical Inquiry 567–574
- Nijar, Gurdial Singh, The Nagoya–Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety: An Analysis and Implementation Challenges, 13 (2013) Int. Environ. Agreements 271–290
- Civil Liability in the Supplementary Protocol, in: Akiho Shibata (ed.), International Liability Regime for Biodiversity Damage. The Nagoya-Kuala Lumpur Supplementary Protocol (Taylor & Francis, London 2014), 111–124
- Nijar, Gurdial Singh/Dawkins, Kristin/Sorensen, Neil, Developing a Liability and Redress Regime Under the Cartagena Protocol on Biosafety: For Damage Resulting from the Transboundary Movements of Genetically Modified Organisms (2005), available at: https://www.iatp.org/sites/default/files/Developing_a_Liability_and_Redress_Regime_und.pdf (last accessed 28 May 2022)
- Nijar, Gurdial Singh/Lawson-Stopps, Sarah/Gan, Pei Fern, Liability & Redress Under the Cartagena Protocol on Biosafety: A Record of the Negotiations for Developing International Rules (CEBLAW, Kuala Lumpur 2008)
- Noble, Charleston/Adlam, Ben/Church, George M./Esvelt, Kevin M./Nowak, Martin A., Current CRISPR Gene Drive Systems Are Likely to Be Highly Invasive in Wild Populations, 7 (2018) eLife e33423
- Noble, Charleston/Min, John/Olejarz, Jason et al., Daisy-Chain Gene Drives for the Alteration of Local Populations, 116 (2019) PNAS 8275–8282
- Noble, Charleston/Olejarz, Jason/Esvelt, Kevin M./Church, George M./Nowak, Martin A., Evolutionary Dynamics of CRISPR Gene Drives, 3 (2017) Science Advances e1601964
- Nollkaemper, André, Cluster-Litigation in Cases of Transboundary Environmental Harm, in: Michael G. Faure/Ying Song (eds.), China and International Environmental Liability. Legal Remedies for Transboundary Pollution (Edward Elgar, Cheltenham/Northampton 2008), 11–37
- Procedural Aspects of Shared Responsibility in International Adjudication, 4 (2013) Journal of International Dispute Settlement 277–294

- Nollkaemper, André/Jacobs, Dov, Shared Responsibility in International Law: A Conceptual Framework, 34 (2013) Mich. J. Int'l L. 359–438
- North, Ace R./Burt, Austin/Godfray, H. Charles J., Modelling the Suppression of a Malaria Vector Using a CRISPR-Cas9 Gene Drive to Reduce Female Fertility, 18 (2020) BMC Biology 98
- Nuismer, Scott L./Althouse, Benjamin M./May, Ryan et al., Eradicating Infectious Disease Using Weakly Transmissible Vaccines, 283 (2016) Proc. R. Soc. B
- Nuismer, Scott L./Bull, James J., Self-Disseminating Vaccines to Suppress Zoonoses, 4 (2020) Nature Ecology & Evolution 1168–1173
- Oeter, Stefan, Methods and Means of Combat, in: Dieter Fleck (ed.), The Handbook of International Humanitarian Law (3rd ed., Oxford University Press, Oxford 2013), 115–230
- O'Hara, Peter, The Illegal Introduction of Rabbit Haemorrhagic Disease Virus in New Zealand, 25 (2006) Revue scientifique et technique (International Office of Epizootics) 119–123
- Ohio State University, College of Food, Agricultural, and Environmental Sciences, Insect Allies: How the Enemies of Corn May Someday Save It (16 October 2017), available at: <https://cfaes.osu.edu/news/articles/insect-allies-how-the-enemies-corn-may-someday-save-it> (last accessed 28 May 2022)
- Okowa, Phoebe N., Procedural Obligations in International Environmental Agreements, 67 (1997) BYIL 275–336
- State Responsibility for Transboundary Air Pollution in International Law (Oxford University Press, Oxford 2000)
- Responsibility for Environmental Damage, in: Malgosia A. Fitzmaurice/David Ong/Panos Merkouris (eds.), Research Handbook on International Environmental Law (Edward Elgar, Cheltenham 2010), 303–319
- Principle 18, in: Jorge E. Viñuales (ed.), The Rio Declaration on Environment and Development: A Commentary (Oxford University Press, Oxford 2015), 471–492
- Olleson, Simon, Attribution in Investment Treaty Arbitration, 31 (2016) ICSID Review 457–483
- O'Neill, Onora, Informed Consent and Public Health, 359 (2004) Philos. Trans. R. Soc. B 1133–1136
- O'Neill, Scott L./Ryan, Peter A./Turley, Andrew P. et al., Scaled Deployment of *Wolbachia* to Protect the Community from Dengue and Other *Aedes* Transmitted Arboviruses, 2 (2018) Gates Open Research 36
- Oppenheim, Lassa Francis Lawrence, International Law: A Treatise, Vol. 1: Peace (2nd ed., Longmans, Green & Co., London 1912)
- Orgel, L. E./Crick, F. H. C., Selfish DNA: The Ultimate Parasite, 284 (1980) Nature 604
- Ormond, Kelly E./Mortlock, Douglas P./Scholes, Derek T. et al., Human Germline Genome Editing: ASHG Position Statement, 101 (2017) American Journal of Human Genetics 167–176

- Orsini, Amandine*, Business as a Regulatory Leader for Risk Governance? The Compact Initiative for Liability and Redress Under the Cartagena Protocol on Biosafety, 21 (2012) *Environmental Research* 960–979
- Osaka, Eri*, Corporate Liability, Government Liability, and the Fukushima Nuclear Disaster, 21 (2012) *Pacific Rim Law & Policy Journal* 433–459
- Ostera, Graciela R./Gostin, Lawrence O.*, Biosafety Concerns Involving Genetically Modified Mosquitoes to Combat Malaria and Dengue in Developing Countries, 305 (2011) *Journal of the American Medical Association* 930–931
- Outreach Network for Gene Drive Research*, Open Letter: Research on Gene Drive Technology Can Benefit Conservation and Public Health (14 November 2018), available at: <https://genedrivenetwork.org/open-letter> (last accessed 28 May 2022)
- Owen, Michael P.*, Lab Rat's Web Portal for Laboratory Biorisk Management (04 January 2020), available at: <https://www.seanet.com/~owenmp/biosafety/lab-biorisk-mgmt.html> (last accessed 28 May 2022)
- Owens, Brian*, Behind New Zealand's Wild Plan to Purge All Pests, 541 (2017) *Nature News* 148
- Oxman, Bernard H.*, Jurisdiction of States, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Oye, Kenneth A./Esvelt, Kevin/Appleton, Evan et al.*, Regulating Gene Drives, 345 (2014) *Science* 626–628
- Pabo, C. O./Peisach, E./Grant, R. A.*, Design and Selection of Novel Cys2His2 Zinc Finger Proteins, 70 (2001) *Annual Review of Biochemistry* 313–340
- Paddock, LeRoy C.*, Funding Contaminated Site Cleanup in the United States, 3 (1994) *RECIEL* 133–142
- Palchetti, Paolo*, De Facto Organs of a State, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Palmisano, Giuseppe*, Fault, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Papantoniou, Angeliki*, Advisory Opinion on the Environment and Human Rights, Inter-American Court of Human Rights, November 2015, 2017, 112 (2018) *AJIL* 460–466
- Parsons, George R.*, Travel Cost Models, in: Patricia A. Champ/Kevin J. Boyle/Thomas C. Brown (eds.), *A Primer on Nonmarket Valuation* (2nd ed., Springer Nature, Dordrecht 2017), 187–223
- PartnerRe*, GMO: Not New, but Still an Emerging Liability Risk, PartnerReviews May 2013, available at: https://partnerre.com/wp-content/uploads/2017/08/GMO_-_Not_New_But_Still_An_Emerging_Liability_Risk.pdf (last accessed 28 May 2022)

- Pascual, Unai/Muradian, Roldan et al.*, The Economics of Valuing Ecosystem Services and Biodiversity, in: Pushpam Kumar (ed.), The Economics of Ecosystems and Biodiversity: Ecological and Economic Foundations (Routledge, London 2010), 183–256
- Paul, Thomas C.*, Substitution Costs, in: Patricia A. Champ/Kevin J. Boyle/Thomas C. Brown (eds.), A Primer on Nonmarket Valuation (2nd ed., Springer Nature, Dordrecht 2017), 347–390
- Pauwels, Katia/Podevin, Nancy/Breyer, Didier/Carroll, Dana/Herman, Philippe*, Engineering Nucleases for Gene Targeting: Safety and Regulatory Considerations, 31 (2014) New Biotechnology 18–27
- Pavoni, Riccardo*, Assessing and Managing Biotechnology Risk Under the Cartagena Protocol on Biosafety, 10 (2000) Italian YBIL 113–144
- Payne, Cymie R.*, Legal Liability for Environmental Damage: The United Nations Compensation Commission and the 1990–1991 Gulf War, in: Carl Bruch/Carroll Muffett/Sandra S. Nichols (eds.), Governance, Natural Resources, and Post-Conflict Peacebuilding (Earthscan, London 2016), 719–760
- Peck, Alison*, The New Imperialism: Toward an Advocacy Strategy for GMO Accountability, 21 (2008) Geo. Int'l Envtl. L. Rev. 37–72
- Pedersen, Ole W.*, From Abundance to Indeterminacy: The Precautionary Principle and Its Two Camps of Custom, 3 (2014) Transnational Environmental Law 323–339
- Peel, Jacqueline*, New State Responsibility Rules and Compliance with Multilateral Environmental Obligations: Some Case Studies of How the New Rules Might Apply in the International Environmental Context, 10 (2001) RECIEL 82–97
- A GMO by Any Other Name ... Might Be an SPS Risk!: Implications of Expanding the Scope of the WTO Sanitary and Phytosanitary Measures Agreement, 17 (2006) EJIL 1009–1031
- Unpacking the Elements of a State Responsibility Claim for Transboundary Pollution, in: S. Jayakumar/Tommy Koh et al. (eds.), Transboundary Pollution (Edward Elgar, Cheltenham/Northampton 2015), 51–78
- Pennsylvania State University*, Penn State Team Receives \$7M Award to Enlist Insects as Allies for Food Security (20 November 2017), available at: <http://news.psu.edu/story/495037/2017/11/20/research/penn-state-team-receives-7m-award-enlist-insects-allies-food> (last accessed 28 May 2022)
- Pérez Ortega, Rodrigo*, Can Vaccines for Wildlife Prevent Human Pandemics?, Quanta Magazine, 24 August 2020, available at: <https://www.quantamagazine.org/can-vaccines-for-wildlife-prevent-human-pandemics-20200824/> (last accessed 28 May 2022)
- Perisse, Iuri Viotti/Fan, Zhiqiang/Singina, Galina N./White, Kenneth L./Polejaeva, Irina A.*, Improvements in Gene Editing Technology Boost Its Applications in Livestock, 11 (2020) Frontiers in Genetics 614688

- Perron-Welch, Frederic*, Socioeconomics, Biosafety, and Sustainable Development, in: Marie-Claire Cordonier Segger/Frederic Perron-Welch/Christine Frison (eds.), *Legal Aspects of Implementing the Cartagena Protocol on Biosafety* (Cambridge University Press, Cambridge 2013), 147–163
- Petrović, Dražen*, Other Specific Regimes of Responsibility: The UN Compensation Commission, in: James Crawford/Alain Pellet/Simon Olleson (eds.), *The Law of International Responsibility* (Oxford University Press, Oxford 2010), 849–859
- Pevec, Davor*, The Marshall Islands Nuclear Claims Tribunal: The Claims of the Enewetak People, 35 (2006) *Denver J. Int'l. L. & Pol'y* 221–239
- Pfeifer, Kevin/Frieß, Johannes L./Giese, Bernd*, Insect Allies – Assessment of a Viral Approach to Plant Genome Editing, 18 (2022) *Integrated Environmental Assessment and Management*
- Pharmaceutical Inspection Co-operation Scheme (PIC/S)*, Introduction, available at: <https://www.picscheme.org/en/about> (last accessed 28 May 2022)
- Pierce, Benjamin A.*, *Genetics: A Conceptual Approach* (7th ed., Macmillan Learning, New York 2020)
- Pineschi, Laura*, Non-Compliance Procedures and the Law of State Responsibility, in: Tullio Treves/Laura Pineschi et al. (eds.), *Non-Compliance Procedures and Mechanisms and the Effectiveness of International Environmental Agreements* (T.M.C. Asser Press, The Hague 2009), 483–497
- Pisillo-Mazzeschi, Riccardo*, The Due Diligence Rule and the Nature of the International Responsibility of States, 35 (1992) *German YBIL* 9–51
- Pisupati, Balakrishna*, Biotechnology, Cartagena Protocol and the WTO Rules, 7 (2005) *Asian Biotechnology and Development Review* 75–89
- Plakokefalos, Ilias*, Liability for Transboundary Harm, in: André Nollkaemper/Ilias Plakokefalos et al. (eds.), *The Practice of Shared Responsibility in International Law* (Cambridge University Press, Cambridge 2017), 1051–1068
- Pollegioni, Paola/North, Ace R./Persampieri, Tania* et al., Detecting the Population Dynamics of an Autosomal Sex Ratio Distorter Transgene in Malaria Vector Mosquitoes, 57 (2020) *The Journal of Applied Ecology* 2086–2096
- Poulantzas, Dionyssios M.*, The Rule of Exhaustion of Local Remedies and Liability for Space Vehicle Accidents, 31 (1965) *Journal of Air Law and Commerce* 261
- Pourcel, C./Salvignol, G./Vergnaud, G.*, CRISPR Elements in *Yersinia Pestis* Acquire New Repeats by Preferential Uptake of Bacteriophage DNA, and Provide Additional Tools for Evolutionary Studies, 151 (2005) *Microbiology* 653–663
- Predator Free 2050 Limited*, Current Research Projects, available at: <https://pf2050.co.nz/current-research-projects/> (last accessed 28 May 2022)
- Prévost, Denise*, Opening Pandora's Box: The Panel's Findings in the EC-Biotech Products Dispute, 34 (2007) *Legal Issues of Economic Integration* 67–101
- Proelß, Alexander*, Article 34, in: Oliver Dörr/Kirsten Schmalenbach (eds.), *Vienna Convention on the Law of Treaties* (2nd ed., Springer, Berlin, Heidelberg 2018)
- Pugh, Jonathan*, Driven to Extinction? The Ethics of Eradicating Mosquitoes with Gene-Drive Technologies, 42 (2016) *Journal of Medical Ethics* 578–581

- Pythoud, François*, Commodities, in: Christoph Bail/Robert Falkner/Helen Marquard (eds.), *The Cartagena Protocol on Biosafety. Reconciling Trade in Biotechnology with Environment and Development?* (Earthscan, London 2002), 321–328
- Quentin-Baxter, Robert Q.*, Preliminary Report on International Liability for Injurious Consequences Arising Out of Acts Not Prohibited by International Law, YBILC 1980, Vol. II, Pt. 1, p. 247 (1980)
- Quiberoni, Andrea/Moineau, Sylvain/Rousseau, Geneviève M./Reinheimer, Jorge/Ackermann, Hans-Wolfgang*, *Streptococcus Thermophilus Bacteriophages*, 20 (2010) *International Dairy Journal* 657–664
- Raban, Robyn R./Marshall, John M./Akbari, Omar S.*, Progress Towards Engineering Gene Drives for Population Control, 223 (2020) *Journal of Experimental Biology*
- Rabitz, Florian*, Gene Drives and the International Biodiversity Regime, 28 (2019) *RECIEL* 339–348
- The International Governance of Gene Drive Organisms (2021) *Environmental Politics* 1–20
- Ragazzi, Maurizio*, *The Concept of International Obligations Erga Omnes* (Clarendon Press, Oxford 2000)
- Ragni, Chiara*, Procedures and Mechanisms on Compliance Under the 2000 Cartagena Protocol on Biosafety to the 1992 Convention on Biological Diversity, in: Tullio Treves/Laura Pineschi et al. (eds.), *Non-Compliance Procedures and Mechanisms and the Effectiveness of International Environmental Agreements* (T.M.C. Asser Press, The Hague 2009), 101–120
- Rai, Karamjit S./Black, William C.*, Mosquito Genomes: Structure, Organization, and Evolution, 41 (1999) *Advances in Genetics* 1–33
- Raisz, Anikó*, GMO as a Weapon – a.k.a. a New Form of Aggression?, 2 (2014) *Hungarian Yearbook of International Law and European Law* 275–288
- Rani, Reema/Yadav, Prashant/Barbadikar, Kalyani M. et al.*, CRISPR/Cas9: A Promising Way to Exploit Genetic Variation in Plants, 38 (2016) *Biotechnology Letters* 1991–2006
- Rao, Pemmaraju Sreenivasa*, First Report on the Legal Regime for Allocation of Loss in Case of Transboundary Harm Arising Out of Hazardous Activities, UN Doc. A/CN.4/531 (2003)
- Second Report on the Legal Regime for the Allocation of Loss in Case of Transboundary Harm Arising Out of Hazardous Activities, UN Doc. A/CN.4/540 (2004)
- Third Report on the Legal Regime for the Allocation of Loss in Case of Transboundary Harm Arising Out of Hazardous Activities, UN Doc. A/CN.4/566 (2006)
- Ratliff, Dane P.*, The PCA Optional Rules for Arbitration of Disputes Relating to Natural Resources and/or the Environment, 14 (2001) *Leiden J. Int'l L.* 887–896

- Read, John E., The Trail Smelter Dispute, 1 (1963) Canadian YBIL 213–229
- Redford, Kent H./Brooks, Thomas M./Macfarlane, Nicholas B.W./Adams, Jonathan S., Genetic Frontiers for Conservation: An Assessment of Synthetic Biology and Biodiversity Conservation (IUCN, International Union for Conservation of Nature 2019)
- Redgwell, Catherine, Biotechnology, Biodiversity and International Law, 58 (2005) Current Legal Problems 543–569
- Redick, Thomas P., Handling, Transport, Packaging, and Information, in: Marie-Claire Cordonier Segger/Frederic Perron-Welch/Christine Frison (eds.), Legal Aspects of Implementing the Cartagena Protocol on Biosafety (Cambridge University Press, Cambridge 2013), 89–110
- Reeves, R. Guy/Boëte, Christophe/Beck, Felix et al., Gesundheitsbereich: Bekämpfung von Malaria in Afrika durch Einsatz von Gene Drives versus Malariabekämpfung durch andere Herangehensweisen/Maßnahmen: Report for the Office of Technology Assessment at the German Bundestag; unpublished, on file with author (2020)
- Reeves, R. Guy/Bryk, Jaroslaw/Altrock, Philipp M./Denton, Jai A./Reed, Floyd A., First Steps Towards Underdominant Genetic Transformation of Insect Populations, 9 (2014) PLOS ONE e97557
- Reeves, R. Guy/Denton, Jai A./Santucci, Fiammetta/Bryk, Jaroslaw/Reed, Floyd A., Scientific Standards and the Regulation of Genetically Modified Insects, 6 (2012) PLOS Neglected Tropical Diseases e1502
- Reeves, R. Guy/Phillipson, Martin, Mass Releases of Genetically Modified Insects in Area-Wide Pest Control Programs and Their Impact on Organic Farmers, 9 (2017) Sustainability 59
- Reeves, R. Guy/Voeneky, Silja/Caetano-Anollés, Derek/Beck, Felix/Boëte, Christophe, Agricultural Research, or a New Bioweapon System?, 362 (2018) Science 35–37
- Regalado, Antonio, Exclusive: Chinese Scientists Are Creating CRISPR Babies, MIT Technology Review, 25 November 2018, available at: <https://www.technologyreview.com/2018/11/25/138962/exclusive-chinese-scientists-are-creating-crispr-babies/> (last accessed 28 May 2022)
- Rey García, Paula, Directive 2001/18/EC on the Deliberate Release into the Environment of GMOs: An Overview and the Main Provisions for Placing on the Market, 3 (2006) JEEPL 3–12
- Reynolds, Jesse L., Governing New Biotechnologies for Biodiversity Conservation: Gene Drives, International Law, and Emerging Politics, 20 (2020) Global Environmental Politics 28–48
- Engineering Biological Diversity: The International Governance of Synthetic Biology, Gene Drives, and De-Extinction for Conservation, 49 (2021) Current Opinion in Environmental Sustainability 1–6
- Ricci, Ezra, Biosafety Regulation: The Cartagena Protocol (2004), available at: <http://www.ruig-gian.org/ressources/Brochure3Cartagenaprotoc.pdf> (last accessed 28 May 2022)

- Richardson, Christopher D./Ray, Graham J./DeWitt, Mark A./Curie, Gemma L./Corn, Jacob E., Enhancing Homology-Directed Genome Editing by Catalytically Active and Inactive CRISPR-Cas9 Using Asymmetric Donor DNA, 34 (2016) *Nature Biotech.* 339–344
- Ricroch, Agnes E./Ammann, Klaus/Kuntz, Marcel, Editing EU Legislation to Fit Plant Genome Editing, 17 (2016) *EMBO Reports* 1365–1369
- Rincon, Paul, Coronavirus: Is There Any Evidence for Lab Release Theory?, BBC News, 01 May 2020, available at: <https://www.bbc.com/news/science-environment-52318539> (last accessed 28 May 2022)
- Roberts, Andrew/Andrade, Paulo Paes de/Okumu, Fredros O. et al., Results from the Workshop “Problem Formulation for the Use of Gene Drive in Mosquitoes”, 96 (2017) *Am. J. Trop. Med. Hyg.* 530–533
- Rockman, Matthew V./Skrovanek, Sonja S./Kruglyak, Leonid, Selection at Linked Sites Shapes Heritable Phenotypic Variation in *C. Elegans*, 330 (2010) *Science* 372–376
- Rommens, Caius M., Intragenic Crop Improvement: Combining the Benefits of Traditional Breeding and Genetic Engineering, 55 (2007) *Journal of Agricultural and Food Chemistry* 4281–4288
- Rosenberger, Randall S./Loomis, John B., Benefit Transfer, in: Patricia A. Champ/ Kevin J. Boyle/Thomas C. Brown (eds.), *A Primer on Nonmarket Valuation* (2nd ed., Springer Nature, Dordrecht 2017), 431–462
- Royal Society, Gene Drive Research: Why It Matters (2018), available at: <https://royalsociety.org/~media/policy/Publications/2018/08-11-18-gene-drive-statement.pdf> (last accessed 28 May 2022)
- Royal Swedish Academy of Sciences, The Nobel Prize in Chemistry 2020 (07 October 2020), available at: <https://www.kva.se/en/pressrum/pressmeddelanden/nobelpriset-i-kemi-2020> (last accessed 28 May 2022)
- Rubin, Alfred P., Pollution by Analogy: The Trail Smelter Arbitration, 50 (1971) *Oregon Law Review* 259–282
- Rudall, Jason, Certain Activities Carried Out by Nicaragua in the Border Area (Costa Rica V. Nicaragua), 112 (2018) *AJIL* 288–294
- Compensation for Environmental Damage Under International Law (Routledge, Abingdon/New York 2020)
- Rulli, Tina, CRISPR and the Ethics of Gene Drive in Mosquitoes, in: David Boonin (ed.), *The Palgrave Handbook of Philosophy and Public Policy* (Springer International Publishing, Cham 2018), 509–521
- Runge, Jan-Niklas/Lindholm, Anna K., Carrying a Selfish Genetic Element Predicts Increased Migration Propensity in Free-Living Wild House Mice, 285 (2018) *Proc. R. Soc. B* 1333
- Ryan, Owen W./Skerker, Jeffrey M./Maurer, Matthew J. et al., Selection of Chromosomal DNA Libraries Using a Multiplex CRISPR System, 3 (2014) *eLife* e03703
- Ryngaert, Cedric, State Responsibility and Non-State Actors, in: Math Noortmann/August Reinisch/Cedric Ryngaert (eds.), *Non-State Actors in International Law* (Hart, Oxford 2015), 163–182

- Sachariew, K.*, State Responsibility for Multilateral Treaty Violations: Identifying the 'Injured State' and Its Legal Status, 35 (1988) NLR 273
- The Definition of Thresholds of Tolerance for Transboundary Environmental Injury Under International Law: Development and Present Status, 37 (1990) Netherlands International Law Review 193–206
- Sachs, Noah*, Beyond the Liability Wall: Strengthening Tort Remedies in International Environmental Law, 55 (2007) UCLA Law Review 837–904
- Sadat-Akhavi, Seyed-Ali*, Methods of Resolving Conflicts Between Treaties (Brill Nijhoff, Leiden/Boston 2003)
- Safrin, Sabrina*, The Relationship with Other Agreements: Much Ado About a Savings Clause, in: Christoph Bail/Robert Falkner/Helen Marquard (eds.), The Cartagena Protocol on Biosafety. Reconciling Trade in Biotechnology with Environment and Development? (Earthscan, London 2002), 438–454
- Sami, Abdul/Xue, Zhao/Tazein, Saheera et al.*, CRISPR-Cas9-Based Genetic Engineering for Crop Improvement Under Drought Stress, 12 (2021) Bioengineered 5814–5829
- Sánchez, Miguel A./Parrott, Wayne A.*, Characterization of Scientific Studies Usually Cited as Evidence of Adverse Effects of GM Food/Feed, 15 (2017) Plant Biotechnology Journal 1227–1234
- Sand, Peter H.*, Compensation for Environmental Damage from the 1991 Gulf War, 35 (2005) Environmental Policy and Law 244–249
- Enforcing CITES: The Rise and Fall of Trade Sanctions, 22 (2013) RE-CIEL 251–263
- Sand, Peter H./Hammit, James K.*, Public Health Claims, in: Cymie R. Payne/Peter H. Sand (eds.), Gulf War Reparations and the UN Compensation Commission. Environmental Liability (Oxford University Press, Oxford/New York 2011), 193–217
- Sander, Gerald G.*, Codex Alimentarius Commission (CAC), in: Rüdiger Wolfrum/Anne Peters (eds.), Max Planck Encyclopedia of Public International Law, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Sander, Jeffry D./Joung, J. Keith*, CRISPR-Cas Systems for Editing, Regulating and Targeting Genomes, 32 (2014) Nature Biotech. 347–355
- Sands, Philippe* (ed.), Chernobyl: Law and Communication: Transboundary Nuclear Air Pollution – The Legal Materials (Grotius Publications Ltd., Cambridge 1988)
- Sands, Philippe/Peel, Jacqueline/Fabra, Adriana/Mackenzie, Ruth*, Principles of International Environmental Law (4th ed., Cambridge University Press, Cambridge et al. 2018)
- Sands, Philippe/Stewart, Richard B.*, Valuation of Environmental Damage – US and International Law Approaches, 5 (1995) RECIEL 290–296
- Saprauskas, Rimantas/Gasiunas, Giedrius/Fremaux, Christophe et al.*, The Streptococcus Thermophilus CRISPR/Cas System Provides Immunity in Escherichia Coli, 39 (2011) Nucleic Acids Res. 9275–9282

- Saxler, Barbara/Siegfried, Jule/Proelss, Alexander*, International Liability for Transboundary Damage Arising from Stratospheric Aerosol Injections, 7 (2015) *Law, Innovation and Technology* 112–147
- Schaefer, Kellie A./Wu, Wen-Hsuan/Colgan, Diana F. et al.*, Unexpected Mutations After CRISPR-Cas9 Editing in Vivo, 14 (2017) *Nature Methods* 547–548
- Schlegel, Rolf H. J.*, Concise Encyclopedia of Crop Improvement: Institutions, Persons, Theories, Methods, and Histories (Haworth Food & Agricultural Press, New York 2007)
- Schleiden, Sebastian/Dederer, Hans-Georg/Sgodda, Susan et al.*, Human Germline Editing in the Era of CRISPR-Cas: Risk and Uncertainty, Inter-Generational Responsibility, Therapeutic Legitimacy, 21 (2020) *BMC Medical Ethics* 87
- Schmalenbach, Kirsten*, Verantwortlichkeit und Haftung, in: Alexander Proelß (ed.), *Internationales Umweltrecht* (De Gruyter, Berlin 2017), 211–242
- Article 26, in: Oliver Dörr/Kirsten Schmalenbach (eds.), *Vienna Convention on the Law of Treaties* (2nd ed., Springer, Berlin, Heidelberg 2018)
- Schmitt, Daniela M.*, Staatenverantwortlichkeit für Schäden an der biologischen Vielfalt (2018)
- Schoonejans, Eric*, Advance Informed Agreement Procedures, in: Christoph Bail/Robert Falkner/Helen Marquard (eds.), *The Cartagena Protocol on Biosafety. Reconciling Trade in Biotechnology with Environment and Development?* (Earthscan, London 2002), 299–320
- Schrijver, Nico J.*, Certain Phosphate Lands in Nauru Case (Nauru v Australia), in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Schuster, Felix/Aldag, Patrick/Frenzel, Antje et al.*, CRISPR/Cas12a Mediated Knock-in of the Polled Celtic Variant to Produce a Polled Genotype in Dairy Cattle, 10 (2020) *Sci. Rep.* 13570
- Schwartz, Bryan/Berlin, Mark L.*, After the Fall: An Analysis of Canadian Legal Claims for Damage Caused by Cosmos 954, 27 (1982) *McGill Law Journal* 676–720
- Schwartz, Priscilla*, Principle 16, in: Jorge E. Viñuales (ed.), *The Rio Declaration on Environment and Development: A Commentary* (Oxford University Press, Oxford 2015), 429–450
- Schwermer, Sylvia*, Annex A: Economic Valuation Methods, in: UBA (ed.), *Economic Valuation of Environmental Damage. Methodological Convention 2.0 for Estimates of Environmental Costs* (2012)
- Scott, Joanne*, The WTO Agreement on Sanitary and Phytosanitary Measures: A Commentary (Oxford University Press, Oxford 2007)
- Scovazzi, Tullio*, Some Remarks on International Responsibility in the Field of Environmental Protection, in: Maurizio Ragazzi (ed.), *International Responsibility Today. Essays in Memory of Oscar Schachter* (Nijhoff, Leiden 2005), 209–222

- Sdunzig, Tobias*, Die UN-Konvention über Biodiversität und ihre Zusatzprotokolle: Verhandlungshistorie, Inhalt, Kritik sowie Analyse der rechtlichen Steuerungsfähigkeit aus völkerrechtlicher und europarechtlicher Sicht (Nomos, Baden-Baden 2017)
- Secretariat of the Convention on Biological Diversity (CBD Secretariat)*, Handbook of the Convention on Biological Diversity: Including Its Cartagena Protocol on Biosafety (3rd ed., Secretariat of the Convention on Biological Diversity, Montreal 2005)
- Status of Third-Party Liability Treaties and Analysis of Difficulties Facing Their Entry into Force: Note by the Executive Secretary, UN Doc. UNEP/CBD/BS/WG-L&R/1/INF/3 (2005)
 - An Exploration of Tools and Methodologies for Valuation of Biodiversity and Biodiversity Resources and Functions, CBD Technical Series No. 28 (Montreal 2007), available at: <https://www.cbd.int/doc/publications/cbd-ts-28.pdf> (last accessed 28 May 2022)
 - The Concept of Imminent Threat of Damage and Its Legal and Technical Implications: Note by the Executive Secretary, UN Doc. UNEP/CBD/BS/GF-L&R/3/INF/2 (2010)
 - Summary Report on the Survey on the Application of and Experience in the Use of Socio-Economic Considerations in Decision-Making on Living Modified Organisms: Note by the Executive Secretary, UN Doc. UNEP/CBD/BS/COP-MOP/5/INF/10 (2010)
 - Standards for Shipments of Living Modified Organisms: Outcomes of an Online Forum, CBD Biosafety Technical Series 01 (Montreal 2011), available at: <https://bch.cbd.int/database/record.shtml?documentid=103868> (last accessed 28 May 2022)
 - Analysis of the Results of the Testing of the “Guidance on Risk Assessment of Living Modified Organisms”, UN Doc. UNEP/CBD/BS/COP-MOP/7/INF/3 (2014)
 - The N-KL Supplementary Protocol: Capacity Building Activities (01 January 2018), available at: https://bch.cbd.int/protocol/supplementary/NKL_workshops.shtml#tab=0 (last accessed 28 May 2022)
 - Press Release: Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress Comes into Force (05 March 2018), available at: <http://bch.cbd.int/protocol/e-doc/?news=116175> (last accessed 28 May 2022)
 - Cartagena Protocol on Biosafety, Biosafety Clearing-House and Article 17 National Focal Points (27 May 2022), available at: <https://www.cbd.int/doc/lists/cpb-bch-a17-fp.pdf> (last accessed 28 May 2022)
 - Calendar of SCBD Meetings (25 May 2022), available at: <https://www.cbd.int/meetings/> (last accessed 28 May 2022)
- Segers, Seppe/Mertes, Heidi*, Does Human Genome Editing Reinforce or Violate Human Dignity?, 34 (2020) Bioethics 33–40

- Segerson, Kathleen*, Valuing Environmental Goods and Services: An Economic Perspective, in: Patricia A. Champ/Kevin J. Boyle/Thomas C. Brown (eds.), *A Primer on Nonmarket Valuation* (2nd ed., Springer Nature, Dordrecht 2017), 1–25
- Selle, Kurt/Barrangou, Rodolphe*, CRISPR-Based Technologies and the Future of Food Science, 80 (2015) *Journal of Food Science* R2367
- Semenov, B. A.*, Nuclear Power in the Soviet Union, 25 (1983) *IAEA Bulletin* 47–59
- Sendut, Jefferi Hamzah*, The International Court of Justice and Compensation for Environmental Harm: A Missed Opportunity?, 1 (2018) *De Lege Ferenda* 17–29
- Serbus, Laura R./Casper-Lindley, Catharina/Landmann, Frederic/Sullivan, William*, The Genetics and Cell Biology of Wolbachia-Host Interactions, 42 (2008) *Annual Review of Genetics* 683–707
- Shalem, Ophir/Sanjana, Neville E./Zhang, Feng*, High-Throughput Functional Genomics Using CRISPR–Cas9, 16 (2015) *Nature Rev. Genet.* 299
- Shapiro, James A.*, Revisiting the Central Dogma in the 21st Century, 1178 (2009) *Annals of the New York Academy of Sciences* 6–28
- Shapiro, James A./Sternberg, Richard von*, Why Repetitive DNA Is Essential to Genome Function, 80 (2005) *Biological Reviews of the Cambridge Philosophical Society* 227–250
- Shaw, Malcolm N.*, *International Law* (8th ed., Cambridge University Press, Cambridge, UK et al. 2017)
- Shibata, Akiho*, A New Dimension in International Environmental Liability Regimes: A Prelude to the Supplementary Protocol, in: *International Liability Regime for Biodiversity Damage. The Nagoya-Kuala Lumpur Supplementary Protocol* (Taylor & Francis, London 2014), 17–51
- Conclusion: Beyond the Supplementary Protocol, in: Akiho Shibata (ed.), *International Liability Regime for Biodiversity Damage. The Nagoya-Kuala Lumpur Supplementary Protocol* (Taylor & Francis, London 2014), 240–251
- *International Liability Regime for Biodiversity Damage: The Nagoya-Kuala Lumpur Supplementary Protocol* (Taylor & Francis, London 2014)
- Shine, Clare*, Invasive Species in an International Context: IPPC, CBD, European Strategy on Invasive Alien Species and Other Legal Instruments, 37 (2007) *EPPO Bulletin* 103–113
- Shmakov, Sergey/Abudayyeh, Omar O./Makarova, Kira S. et al.*, Discovery and Functional Characterization of Diverse Class 2 CRISPR–Cas Systems, 60 (2015) *Molecular Cell* 385–397
- Sicilianos, Linos-Alexander*, The Classification of Obligations and the Multilateral Dimension of the Relations of International Responsibility, 13 (2002) *EJIL* 1127–1145
- Silver, Lee M.*, The Peculiar Journey of a Selfish Chromosome: Mouse t Haplotypes and Meiotic Drive, 9 (1993) *Trends in Genetics* 250–254
- Simon, Samson/Otto, Mathias/Engelhard, Margret*, Scan the Horizon for Unprecedented Risks, 362 (2018) *Science* 1007–1008

- Synthetic Gene Drive: Between Continuity and Novelty: Crucial Differences Between Gene Drive and Genetically Modified Organisms Require an Adapted Risk Assessment for Their Use (2018) *EMBO Reports* e45760
- Simoni, Alekos/Hammond, Andrew M./Beaghton, Andrea K. et al.*, A Male-Biased Sex-Distorter Gene Drive for the Human Malaria Vector *Anopheles Gambiae*, 38 (2020) *Nature Biotech.* 1054–1060
- Simoni, Alekos/Siniscalchi, Carla/Chan, Yuk-Sang et al.*, Development of Synthetic Selfish Elements Based on Modular Nucleases in *Drosophila Melanogaster*, 42 (2014) *Nucleic Acids Res.* 7461–7472
- Sirinathsinghji, Eva*, Why Genome Edited Organisms Are Not Excluded from the Cartagena Protocol on Biosafety, *TWN Biosafety Briefing* (2020), available at: <https://biosafety-info.net/wp-content/uploads/2020/12/Biosafety-Briefing-English.pdf> (last accessed 28 May 2022)
- Skåre, Mari*, Liability Annex or Annexes to the Environmental Protocol: A Review of the Process Within the Antarctic Treaty System, in: Davor Vidas (ed.), *Implementing the Environmental Protection Regime for the Antarctic* (Springer Science+Business Media, Dordrecht 2000), 163–180
- Smets, Greet/Rüdelsheim, Patrick*, Study on Risk Assessment: Application of Annex I of Decision CP 9/13 to Living Modified Organisms Containing Engineered Gene Drives, UN Doc. CBD/CP/RA/AHTEG/2020/1/4, Annex (2020)
- Smyth, Stuart J./Kershen, Drew L.*, Agricultural Biotechnology: Legal Liability Regimes from Comparative and International Perspectives, 6 (2006) *Global Jurist Advances* 1–78
- Solf, Waldemar A.*, Article 55 AP I, in: Michael Bothe/Karl J. Partsch/Waldemar A. Solf (eds.), *New Rules for Victims of Armed Conflicts. Commentary on the Two 1977 Additional to the Geneva Conventions of 1949* (Martinus Nijhoff, Leiden/Boston 2013)
- Sprink, Thorben/Eriksson, Dennis/Schiemann, Joachim/Hartung, Frank*, Regulatory Hurdles for Genome Editing: Process- vs. Product-Based Approaches in Different Regulatory Contexts, 35 (2016) *Plant Cell Reports* 1493–1506
- Steel, Daniel*, *Philosophy and the Precautionary Principle: Science, Evidence, and Environmental Policy* (Cambridge University Press, Cambridge, U.K. 2015)
- Stein, Rob*, In a 1st, Doctors in U.S. Use CRISPR Tool to Treat Patient with Genetic Disorder, NPR, 29 July 2019, available at: <https://www.npr.org/sections/health-shots/2019/07/29/744826505/sickle-cell-patient-reveals-why-she-is-volunteering-for-landmark-gene-editing-st?t=1617188222805> (last accessed 28 May 2022)
- In a 1st, Scientists Use Revolutionary Gene-Editing Tool to Edit Inside a Patient, NPR, 04 March 2020, available at: <https://www.npr.org/sections/health-shots/2020/03/04/811461486/in-a-1st-scientists-use-revolutionary-gene-editing-tool-to-edit-inside-a-patient> (last accessed 28 May 2022)
- Steinbrecher, Ricarda A.*, Genetic Engineering in Plants and the “New Breeding Techniques (NBTs)”: Inherent Risks and the Need to Regulate (2015)

- Stephens, Tim*, Article 235 UNCLOS, in: Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea: A Commentary* (C.H.Beck/Hart/Nomos, München et al. 2017)
- Stewart, Terence P./Johanson, David S.*, A Nexus of Trade and the Environment: The Relationship Between the Cartagena Protocol on Biosafety and the SPS Agreement of the World Trade Organization, 14 (2003) *Colorado Journal of International Environmental Law and Policy* 1–52
- Stoll, Peter-Tobias*, Controlling the Risks of Genetically Modified Organisms: The Cartagena Protocol on Biosafety and the SPS Agreement, 10 (1999) *YB Int'l Env. L.* 82–119
- Transboundary Pollution, in: Fred L. Morrison/Rüdiger Wolfrum (eds.), *International, Regional, and National Environmental Law* (Kluwer Law International, The Hague/London 2000), 169–200
- World Trade Organization, Dispute Settlement, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Strauss, Debra M.*, The Application of TRIPS to GMOs: International Intellectual Property Rights and Biotechnology, 45 (2009) *Stan. J. Int'l L.* 287–320
- Subrin, Stephen N.*, Fishing Expeditions Allowed: The Historical Background of the 1938 Federal Discovery Rules, 39 (1998) *Boston College Law Review* 691–745
- Sugahara, Ryohei/Saeki, Shinjiro/Jouraku, Akiya/Shiotsuki, Takahiro/Tanaka, Seiji*, Knockdown of the Corazonin Gene Reveals Its Critical Role in the Control of Gregarious Characteristics in the Desert Locust, 79 (2015) *Journal of Insect Physiology* 80–87
- Sun, Yongwei/Jiao, Guiai/Liu, Zupei et al.*, Generation of High-Amylose Rice Through CRISPR/Cas9-Mediated Targeted Mutagenesis of Starch Branching Enzymes, 8 (2017) *Front. Plant Sci.* 298
- Swetlitz, Ike*, Researchers to Release First-Ever Genetically Engineered Mosquitoes in Africa, STAT, 05 September 2018, available at: <https://www.statnews.com/2018/09/05/release-genetically-engineered-mosquitoes-africa/> (last accessed 28 May 2022)
- Swiss Federal Ethics Committee on Non-Human Biotechnology*, Gene Drives: Ethical Considerations on the Use of Gene Drives in the Environment (2019), available at: https://www.ekah.admin.ch/inhalte/ekah-dateien/dokumentation/publikationen/EKAH_Bericht_Gene_Drives_EN_V2.pdf (last accessed 28 May 2022)
- Switzerland, Département fédéral des affaires étrangères*, Etats parties au Protocole additionnel aux Conventions de Genève du 12 août 1949 relatif à la protection des victimes des conflits armés internationaux, available at: https://www.eda.admin.ch/dam/eda/fr/documents/aussenpolitik/voelkerrecht/geneve/1977-PROT-1_fr.pdf (last accessed 28 May 2022)
- SynBioWatch*, Common Call for a Global Moratorium on Genetically-Engineered Gene Drives (05 December 2016), available at: <http://www.synbiowatch.org/gene-drives/gene-drives-moratorium/?lores> (last accessed 28 May 2022)

- A Call to Protect Food Systems from Genetic Extinction Technology: The Global Food and Agriculture Movement Says No to Release of Gene Drives (16 October 2018), available at: http://www.etcgroup.org/sites/www.etcgroup.org/files/files/etc_ftfsignonletter113018engweb_1.pdf (last accessed 28 May 2022)
- Synolakis, Costas/Kanoğlu, Utku*, The Fukushima Accident Was Preventable, 373 (2015) *Philos. Trans. R. Soc. A* 20140379
- Szablowski, David*, Operationalizing Free, Prior, and Informed Consent in the Extractive Industry Sector? Examining the Challenges of a Negotiated Model of Justice, 30 (2010) *Canadian Journal of Development Studies* 111–130
- Takeuchi, Ryo/Choi, Michael/Stoddard, Barry L.*, Redesign of Extensive Protein–DNA Interfaces of Meganucleases Using Iterative Cycles of in Vitro Compartmentalization, 111 (2014) *PNAS* 4061–4066
- Talmon, Stefan*, The Responsibility of Outside Powers for Acts of Secessionist Entities, 58 (2009) *ICLQ* 493–517
- Tams, Christian J.*, All's Well that Ends Well: Comments on the ILCs Articles on State Responsibility, 62 (2002) *ZaöRV* 759–808
- Waiver, Acquiescence and Extinctive Prescription, in: James Crawford/Alain Pellet/Simon Olleson (eds.), *The Law of International Responsibility* (Oxford University Press, Oxford 2010), 1035–1049
- Tan, Wenfang/Proudfoot, Chris/Lillico, Simon G./Whitelaw, C. Bruce A.*, Gene Targeting, Genome Editing: From Dolly to Editors, 25 (2016) *Transgenic Research* 273–287
- Tang, Lichun/Zeng, Yanting/Du, Hongzi et al.*, CRISPR/Cas9-Mediated Gene Editing in Human Zygotes Using Cas9 Protein, 292 (2017) *Molecular Genetics and Genomics* 525–533
- Tanzi, Attila*, Liability for Lawful Acts, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Target Malaria*, Male Bias and Female Fertility, available at: <https://targetmalaria.org/what-we-do/our-approach/male-bias-and-female-fertility/> (last accessed 28 May 2022)
- Target Malaria Welcomes the Decision of the National Biosafety Agency of Burkina Faso to Approve a Small-Scale Release of Genetically Modified Sterile Male Mosquitoes (n.d.), available at: https://targetmalaria.org/wp-content/uploads/2021/07/statement_authorisation_nba_bf-1.pdf (last accessed 28 May 2022)
- Who We Are, available at: <https://targetmalaria.org/who-we-are/> (last accessed 28 May 2022)
- Results of the Small-Scale Release of Non Gene Drive Genetically Modified Sterile Male Mosquitoes in Burkina Faso (2021), available at: https://targetmalaria.org/wp-content/uploads/2021/03/Development-pathway_FS_EN_Results-of-the-small-scale-release-of-non-gene-drive-genetically-modified-Burkina-Faso_March_21.pdf (last accessed 28 May 2022)

- Taylor, Laura O., Hedonics, in: Patricia A. Champ/Kevin J. Boyle/Thomas C. Brown (eds.), *A Primer on Nonmarket Valuation* (2nd ed., Springer Nature, Dordrecht 2017), 235–292
- Tebas, Pablo/Stein, David/Tang, Winson W. et al., Gene Editing of CCR5 in Autologous CD4⁺ T Cells of Persons Infected with HIV, 370 (2014) *N. Engl. J. Med.* 901–910
- Teem, John L./Ambali, Aggrey/Glover, Barbara et al., Problem Formulation for Gene Drive Mosquitoes Designed to Reduce Malaria Transmission in Africa: Results from Four Regional Consultations 2016–2018, 18 (2019) *Malaria Journal* 347
- Teetzmann, Constantin, Schutz vor Wissen? Forschung mit doppeltem Verwendungszweck zwischen Schutzpflichten und Wissenschaftsfreiheit (Nomos, Baden-Baden 2020)
- Telesetsky, Anastasia, Introductory Note to the Nagoya-Kuala Lumpur Supplementary Protocol on Liability and Redress, 50 (2011) *ILM* 105–107
- Tewolde Berhan Gebre Egziabher, The Cartagena Protocol on Biosafety: History, Content and Implementation from a Developing Country Perspective, in: Terje Traavik/Li C. Lim (eds.), *Biosafety First. Holistic Approaches to Risk and Uncertainty in Genetic Engineering and Genetically Modified Organisms* (Tapir Academic Press, Trondheim 2009), 389–405
- The Compact: A Contractual Mechanism for Response in the Event of Damage to Biological Diversity Caused by the Release of a Living Modified Organism, Second Amended Text (18 September 2012), available at: <http://www.biodiversitycompact.org/wp-content/uploads/Compact-Second-Amended-Text-with-translation-reference-January-2014-2.pdf> (last accessed 28 May 2022)
- Then, Christoph/Bauer-Panskus, Andreas, Playing Russian Roulette with Biodiversity: Uncontrolled Applications of Gene Editing Threaten Biodiversity, the Rights of Consumers and Farmers, as Well as the Future of Animal and Plant Breeding (Munich 2017), available at: http://www.testbiotech.org/sites/default/files/Russian_Roulette_with_Biodiversity_0.pdf (last accessed 28 May 2022)
- Third World Network, Comments on the Draft Guidelines on Civil Liability and Redress in the Field of Damage Resulting from Transboundary Movements of Living Modified Organisms, 31 May 2010, in: Third World Network (ed.), *Liability and Redress for Damage Resulting from GMOs. The Negotiations Under the Cartagena Protocol on Biosafety* (Penang 2012), 46–51
- Liability and Redress for Damage Resulting from GMOs: The Negotiations Under the Cartagena Protocol on Biosafety (Penang 2012), available at: https://www.twn.my/title2/books/pdf/liability_and_redress.pdf (last accessed 28 May 2022)
- Thizy, Delphine/Coche, Isabelle/Vries, Jantina de, Providing a Policy Framework for Responsible Gene Drive Research: An Analysis of the Existing Governance Landscape and Priority Areas for Further Research, 5 (2020) *Wellcome Open Research* 173

- Thomas, Elmo/Teshome Kebede, Mahlet*, One Legally Binding Provision on Civil Liability: Why It Was so Important from the African Negotiator's Perspective, in: Akiho Shibata (ed.), *International Liability Regime for Biodiversity Damage. The Nagoya-Kuala Lumpur Supplementary Protocol* (Taylor & Francis, London 2014), 125–130
- Thomas, Jim*, The National Academies' Gene Drive Study Has Ignored Important and Obvious Issues, *The Guardian*, 09 June 2016, available at: <https://www.theguardian.com/science/political-science/2016/jun/09/the-national-academies-gene-drive-study-has-ignored-important-and-obvious-issues> (last accessed 28 May 2022)
- Thürer, Daniel*, Soft Law, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Thyme, Summer B./Boissel, Sandrine J. S./Arshiya Quadri, S. et al.*, Reprogramming Homing Endonuclease Specificity Through Computational Design and Directed Evolution, 42 (2014) *Nucleic Acids Res.* 2564–2576
- Tigerstrom, Barbara J. von/Halabi, Sam F./Wilson, Kumanan R.*, The International Health Regulations (2005) And the Re-Establishment of International Travel Amidst the COVID-19 Pandemic, 27 (2020) *Journal of Travel Medicine* 1–4
- Tladi, Dire*, Civil Liability in the Context of the Cartagena Protocol: To Be or Not to Be (Binding)?, 10 (2010) *Int. Environ. Agreements* 15–27
- Challenges and Opportunities in the Implementation of the Supplementary Protocol: Re-Interpretation and Re-Imagination, in: Akiho Shibata (ed.), *International Liability Regime for Biodiversity Damage. The Nagoya-Kuala Lumpur Supplementary Protocol* (Taylor & Francis, London 2014)
- Toczeczk Skarlataakis, Christine/Kinderlerer, Julian*, The Importance of Public Participation, in: Marie-Claire Cordonier Segger/Frederic Perron-Welch/Christine Frison (eds.), *Legal Aspects of Implementing the Cartagena Protocol on Biosafety* (Cambridge University Press, Cambridge 2013), 111–130
- Tomuschat, Christian*, Article 2(3) UNC, in: Bruno Simma/Daniel-Erasmus Khan et al. (eds.), *The Charter of the United Nations. A Commentary* (3rd ed., Oxford University Press, Oxford 2012), 181–199
- Torres, Juan M./Sánchez, Carmen/Ramírez, Miguel A. et al.*, First Field Trial of a Transmissible Recombinant Vaccine Against Myxomatosis and Rabbit Hemorrhagic Disease, 19 (2001) *Vaccine* 4536–4543
- Treves, Tullio*, Article 287 UNCLOS, in: Alexander Proelss (ed.), *United Nations Convention on the Law of the Sea: A Commentary* (C.H.Beck/Hart/Nomos, München et al. 2017)
- Environmental Impact Assessment and the Precautionary Approach: Why Are International Courts and Tribunals Reluctant to Consider Them as General Principles of Law?, in: Mads T. Andenæs/Malgosia A. Fitzmaurice et al. (eds.), *General Principles and the Coherence of International Law* (Brill Nijhoff, Leiden/Boston 2019), 379–388

- Triepel, Heinrich*, Völkerrecht und Landesrecht (Hirschfeld, Leipzig 1899)
- Trouwborst, Arie*, Evolution and Status of the Precautionary Principle in International Law (Kluwer Law International, The Hague 2002)
- Precautionary Rights and Duties of States (Martinus Nijhoff, Boston 2006)
- Tsai, Ching-Sung/Kong, In Lok/Lesmana, Anastashia et al.*, Rapid and Marker-Free Refactoring of Xylose-fermenting Yeast Strains with Cas9/CRISPR, 112 (2015) *Biotechnology and Bioengineering* 2406–2411
- Tsatsakis, Aristidis M./Nawaz, Muhammad Amjad/Kouretas, Demetrios et al.*, Environmental Impacts of Genetically Modified Plants: A Review, 156 (2017) *Environmental Research* 818–833
- Tsuda, Yoshimi/Caposio, Patrizia/Parkins, Christopher J. et al.*, A Replicating Cytomegalovirus-Based Vaccine Encoding a Single Ebola Virus Nucleoprotein CTL Epitope Confers Protection Against Ebola Virus, 5 (2011) *PLoS Neglected Tropical Diseases* e1275
- Tunc, André* (ed.), *International Encyclopedia of Comparative Law*, Vol. XI: Torts (Brill Nijhoff, Leiden 1986)
- Tvedt, Morten Walløe/Schei, Peter Johan*, “Genetic Resources” in the CBD: The Wording, the Past, the Present and the Future, UN Doc. UNEP/CBD/WG-ABS/9/INF/1, Annex (2010)
- Tvedt, Morten Walløe/Young, Tomme R.*, Beyond Access: Exploring Implementation of the Fair and Equitable Sharing Commitment in the CBD, ABS Series No. 2 (2007), available at: <https://portals.iucn.org/library/sites/library/files/documents/EPLP-067-2.pdf> (last accessed 28 May 2022)
- Tyagi, Shaily/Kesiraju, Karthik/Saakre, Manjesh et al.*, Genome Editing for Resistance to Insect Pests: An Emerging Tool for Crop Improvement, 5 (2020) *ACS Omega* 20674–20683
- UC Davis*, Big Win: New Countermeasures to Eliminate Pandemic Risk, available at: <https://www.preemptproject.org/s/BIG-WIN-New-Countermeasures.pdf> (last accessed 28 May 2022)
- Unckless, Robert L./Clark, Andrew G./Messer, Philipp W.*, Evolution of Resistance Against CRISPR/Cas9 Gene Drive, 205 (2017) *Genetics* 827–841
- UNECE*, *The Aarhus Convention: An Implementation Guide* (2nd ed., Geneva 2014)
- *The Aarhus Convention’s GMO Amendment* (12 March 2020), available at: <http://www.unece.org/env/pp/gmos.html> (last accessed 28 May 2022)
- UNEP-GEF BCH Project*, An Introduction to the Biosafety Clearing House (2011), available at: [http://bch.cbd.int/help/trainingmaterials/En/03\)%20Training%20Modules/MO02En.pdf](http://bch.cbd.int/help/trainingmaterials/En/03)%20Training%20Modules/MO02En.pdf) (last accessed 28 May 2022)
- United Kingdom, Department for Environment, Food and Rural Affairs*, An Introductory Guide to Valuing Ecosystem Services (2007), available at: https://ec.europa.eu/environment/nature/biodiversity/economics/pdf/valuing_ecosystems.pdf (last accessed 28 May 2022)
- United Nations Compensation Commission*, UNCC at a Glance, available at: <https://uncc.ch/uncc-glance> (last accessed 28 May 2022)

- United Nations Office at Geneva*, Lists of States Parties, Signatory States and Non-Signatory States of the Biological Weapons Convention, available at: <https://www.un.org/disarmament/biological-weapons/about/membership-and-regional-groups> (last accessed 28 May 2022)
- United Nations Office of Legal Affairs*, Overview of Declarations and Reservations to the New York Convention, available at: https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXII-1&chapter=22&clang=_en (last accessed 28 May 2022)
- Status of the Cartagena Protocol on Biosafety to the Convention on Biological Diversity, United Nations Treaty Collection, available at: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-8-a&chapter=27&clang=_en (last accessed 28 May 2022)
- Status of the Constitution of the World Health Organization, available at: https://treaties.un.org/Pages/showDetails.aspx?objid=080000028002d899&clang=_en (last accessed 28 May 2022)
- Status of the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, available at: https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXVII-13&chapter=27&clang=_en (last accessed 28 May 2022)
- Status of the Convention on Biological Diversity, United Nations Treaty Collection, available at: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-8&chapter=27&clang=_en (last accessed 28 May 2022)
- Status of the Convention on Environmental Impact Assessment in a Transboundary Context, available at: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-4&chapter=27&clang=_en (last accessed 28 May 2022)
- Status of the Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques, United Nations Treaty Collection, available at: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVI-1&chapter=26&clang=_en (last accessed 28 May 2022)
- Status of the Convention on the Recognition and Enforcement of Foreign Arbitral Awards, available at: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXII-1&chapter=22&clang=_en (last accessed 28 May 2022)
- Status of the GMO Amendment to the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, available at: https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXVII-13-b&chapter=27&clang=_en (last accessed 28 May 2022)
- Status of the Nagoya – Kuala Lumpur Supplementary Protocol on Liability and Redress to the Cartagena Protocol on Biosafety, United Nations Treaty Collection, available at: https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-8-c&chapter=27&clang=_en (last accessed 28 May 2022)

- Status of the Protocol for the Prohibition of the Use in War of Asphyxiating, Poisonous or Other Gases, and of Bacteriological Methods of Warfare, available at: https://treaties.un.org/Pages/showDetails.aspx?objid=0800000280167ca8&clang=_en (last accessed 28 May 2022)
- Materials on the Responsibility of States for Internationally Wrongful Acts, UN Doc. ST/LEG/SER.B/25 (2012)
- Status of the International Plant Protection Convention (New Revised Text), United Nations Treaty Collection, available at: https://treaties.un.org/Pages/showDetails.aspx?objid=0800000280066b19&clang=_en (last accessed 28 May 2022)
- University of Joensuu/Environment Canada/United Nations Environment Programme, Multilateral Environmental Agreement Negotiator's Handbook* (2nd ed., Joensuu, Finland 2007)
- University of Oxford, Department of Zoology*, New Project Led by Oxford University's Zoology Department to Study the Community Ecology of the African Mosquito Vectors of Malaria (15 June 2017), available at: <https://www.zoo.ox.ac.uk/article/new-project-led-oxford-universitys-zoology-department-study-community-ecology-african> (last accessed 28 May 2022)
- Urnov, Fyodor D./Ronald, Pamela C./Carroll, Dana*, A Call for Science-Based Review of the European Court's Decision on Gene-Edited Crops, 36 (2018) *Nature Biotech.* 800–802
- van der Meer, Piet*, Definitions, in: Christoph Bail/Robert Falkner/Helen Marquard (eds.), *The Cartagena Protocol on Biosafety. Reconciling Trade in Biotechnology with Environment and Development?* (Earthscan, London 2002), 281–288
- van der Meer, Piet/Angenon, Geert/Bergmans, Hans et al.*, The Status Under EU Law of Organisms Developed Through Novel Genomic Techniques (2021) *European Journal of Risk Regulation* 1–20
- van der Vlugt, C./van den Akker, E./Roesink, C. H./Westra, J.*, Risk Assessment Method for Activities Involving Organisms with a Gene Drive Under Contained Use, RIVM Letter Report 2018–0090 (2018), available at: <https://rivm.openrepository.com/bitstream/handle/10029/622023/2018-0090.pdf?sequence=3&isAllowed=y> (last accessed 28 May 2022)
- van der Vlugt, Cécile J. B./Brown, David D./Lehmann, Kathleen/Leunda, Amaya/Willemarck, Nicolas*, A Framework for the Risk Assessment and Management of Gene Drive Technology in Contained Use, 23 (2018) *Appl. Biosaf.* 25–31
- van die Wiel, Clemens/Schaart, Jan/Nieks, Riens/Visser, Richard*, *Traditional Plant Breeding Methods* (2010), available at: <http://edepot.wur.nl/141713> (last accessed 28 May 2022)
- Vassena, R./Heindryckx, B./Peco, R. et al.*, Genome Engineering Through CRISPR/Cas9 Technology in the Human Germline and Pluripotent Stem Cells, 22 (2016) *Human Reproduction Update* 411–419

- Vega-Barbosa, Giovanny/Aboagye, Lorraine, Human Rights and the Protection of the Environment: The Advisory Opinion of the Inter-American Court of Human Rights, EJIL: Talk!, 26 February 2018, available at: <https://www.ejiltalk.org/human-rights-and-the-protection-of-the-environment-the-advisory-opinion-of-the-inter-american-court-of-human-rights/> (last accessed 28 May 2022)
- Vence, Tracy, “Heroes of CRISPR” Disputed, *The Scientist*, 19 January 2016, available at: <https://www.the-scientist.com/?articles.view/articleNo/45119/title/Heroes-of-CRISPR-Disputed/> (last accessed 28 May 2022)
- Ventura, Andrea/Maddalo, Danilo/Manchado, Eusebio et al., In Vivo Engineering of Oncogenic Chromosomal Rearrangements with the CRISPR/Cas9 System, 516 (2014) *Nature* 423–427
- Verheyen, Roda, *Climate Change Damage and International Law: Prevention, Duties and State Responsibility* (Martinus Nijhoff, Leiden/Boston 2005)
- Vermeer-Künzli, Anna Maria Helena, *The Protection of Individuals by Means of Diplomatic Protection: Diplomatic Protection as a Human Rights Instrument* (Universiteit Leiden, Leiden 2007)
- Vicente, Manuel M./Chaves-Ferreira, Miguel/Jorge, João M. P./Proença, João T./Barreto, Vasco M., The Off-Targets of Clustered Regularly Interspaced Short Palindromic Repeats Gene Editing, 9 (2021) *Frontiers in Cell and Developmental Biology* 718466
- Vihma, Antto, Climate of Consensus: Managing Decision Making in the UN Climate Change Negotiations, 24 (2015) *RECIEL* 58–68
- Vives-Vallés, Juan Antonio/Collonnier, Cécile, The Judgment of the CJEU of 25 July 2018 on Mutagenesis: Interpretation and Interim Legislative Proposal, 10 (2019) *Frontiers in Plant Science* 1813
- Vöneky, Silja, *Die Fortgeltung des Umweltvölkerrechts in internationalen bewaffneten Konflikten* (Springer, Berlin/Heidelberg 2001)
- Analogy in International Law, in: Rüdiger Wolfrum/Anne Peters (eds.), *Max Planck Encyclopedia of Public International Law*, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- The Liability Annex to the Protocol on Environmental Protection to the Antarctic Treaty, in: Doris König/Peter-Tobias Stoll et al. (eds.), *International Law Today: New Challenges and the Need for Reform?* (Springer, Berlin et al. 2008), 165–197
- Recht, Moral und Ethik: Grundlagen und Grenzen demokratischer Legitimation für Ethikgremien (Mohr Siebeck, Tübingen 2012)
- International Standard Setting in Biomedicine – Foundations and New Challenges, 61 (2019) *German YBIL* 131–152
- Limiting the Misuse of the Environment during Peacetime and War – The ENMOD Convention, FIP 5/2020 (2020), available at: https://www.jura.uni-freiburg.de/de/institute/ioeffr2/downloads/online-papers/FIP%202020_05_Voeneky_ENMOD-Convention_final.pdf (last accessed 28 May 2022)

- Vöneky, Silja/Beck, Felix, Article 145 UNCLOS, in: Alexander Proelss (ed.), United Nations Convention on the Law of the Sea: A Commentary (C.H.Beck/Hart/Nomos, München et al. 2017), 1007–1028
- Umweltschutz und Menschenrechte, in: Alexander Proelß (ed.), Internationales Umweltrecht (2nd ed., De Gruyter, Berlin 2022), 191–286
- Vöneky, Silja/Höfelmeier, Anja, Article 139 UNCLOS, in: Alexander Proelss (ed.), United Nations Convention on the Law of the Sea: A Commentary (C.H.Beck/Hart/Nomos, München et al. 2017), 968–976
- Vordermayer, Markus, The Extraterritorial Application of Multilateral Environmental Agreements, 59 (2018) Harv. Int'l L. J. 59–124
- Waibel, Michael, The Diplomatic Channel, in: James Crawford/Alain Pellet/Simon Olleson (eds.), The Law of International Responsibility (Oxford University Press, Oxford 2010), 1085–1097
- Walker, T./Johnson, P. H./Moreira, L. A. et al., The WMel Wolbachia Strain Blocks Dengue and Invades Caged Aedes Aegypti Populations, 476 (2011) Nature 450
- Walton, Beatrice A., Duties Owed: Low-Intensity Cyber Attacks and Liability for Transboundary Torts in International Law, 126 (2017) Yale L.J. 1460–1519
- Waltz, Emily, CRISPR-Edited Crops Free to Enter Market, Skip Regulation, 34 (2016) Nature Biotech. 582
- Gene-Edited CRISPR Mushroom Escapes US Regulation, 532 (2016) Nature News 293
- Wang, Ming/Zuris, John A./Meng, Fantao et al., Efficient Delivery of Genome-Editing Proteins Using Bioreducible Lipid Nanoparticles, 113 (2016) PNAS 2868–2873
- Warmbrod, Kelsey Lane/Kobokovich, Amanda/West, Rachel et al., Gene Drives: Pursuing Opportunities, Minimizing Risk (2020), available at: https://www.centerforhealthsecurity.org/our-work/pubs_archive/pubs-pdfs/2020/200518-Gene-Drives-Report.pdf (last accessed 28 May 2022)
- Wasmer, Martin, Roads Forward for European GMO Policy: Uncertainties in Wake of ECJ Judgment Have to Be Mitigated by Regulatory Reform, 7 (2019) Front. Bioeng. & Biotechnol. 367
- Watson, Crystal/Sell, Tara Kirk/Watson, Matthew et al., Technologies to Address Global Catastrophic Biological Risks (2018), available at: https://www.centerforhealthsecurity.org/our-work/pubs_archive/pubs-pdfs/2018/181009-gcbr-tech-report.pdf (last accessed 28 May 2022)
- Webber, Bruce L./Raghu, S./Edwards, Owain R., Opinion: Is CRISPR-Based Gene Drive a Biocontrol Silver Bullet or Global Conservation Threat?, 112 (2015) PNAS 10565–10567
- Wehrli, A., The WHO Certification Scheme on the Quality of Pharmaceutical Products Moving in International Commerce, 31 (1997) Drug Information Journal 899–902
- Weitzdörfer, Julius, Die Haftung für Nuklearschäden nach japanischem Atomrecht – Rechtsprobleme der Reaktorkatastrophe von Fukushima I, 16 (2011) Zeitschrift für Japanisches Recht 61–115

- Whiteman, Marjorie M., *Damages in International Law*, Vol. III (United States Government Printing Office, Washington, D.C. 1943)
- *Digest of International Law*, Vol. 4 (United States Government Printing Office, Washington, D.C. 1965)
- Whitworth, Kristin M./Rowland, Raymond R. R./Ewen, Catherine L. et al., Gene-Edited Pigs Are Protected from Porcine Reproductive and Respiratory Syndrome Virus, 34 (2016) *Nature Biotech.* 20–22
- WHO Advisory Committee on Developing Global Standards for Governance and Oversight of Human Genome Editing, *Human Genome Editing: As We Explore Options for Global Governance, Caution Must Be Our Watchword* (08 November 2019), available at: <https://www.who.int/news/item/08-11-2019-human-genome-editing-as-we-explore-options-for-global-governance-caution-must-be-our-watchword> (last accessed 28 May 2022)
- WHO Special Programme for Research and Training in Tropical Diseases/Foundation for the National Institutes of Health, *Guidance Framework for Testing of Genetically Modified Mosquitoes* (2nd ed., WHO, Geneva 2021)
- Wicker, Thomas/Sabot, François/Hua-Van, Aurélie et al., A Unified Classification System for Eukaryotic Transposable Elements, 8 (2007) *Nature Rev. Genet.* 973
- Wiener, Jonathan B./Rogers, Michael D., Comparing Precaution in the United States and Europe, 5 (2002) *Journal of Risk Research* 317–349
- Wiersema, Annecoos, The New International Law-Makers? Conferences of the Parties to Multilateral Environmental Agreements, 31 (2008) *Mich. J. Int'l L.* 231–287
- Wilcox, Vanessa, Damage Caused by GMOs Under International Environmental Law, in: Bernhard A. Koch (ed.), *Damage Caused by Genetically Modified Organisms. Comparative Survey of Redress Options for Harm to Persons, Property or the Environment* (De Gruyter, Berlin/New York 2010), 754–783
- Wilde, Ralph, The Extraterritorial Application of International Human Rights Law on Civil and Political Rights, in: Scott Sheeran/Nigel Rodley (eds.), *Routledge Handbook of International Human Rights Law* (Taylor and Francis, Hoboken 2014), 635–661
- Wilson, Christopher J./Fennell, Tim/Bothmer, Anne et al., Response to “Unexpected Mutations After CRISPR-Cas9 Editing in Vivo”, 15 (2018) *Nature Methods* 236–237
- Windbichler, Nikolai/Menichelli, Miriam/Papathanos, Philippos Aris et al., A Synthetic Homing Endonuclease-Based Gene Drive System in the Human Malaria Mosquito, 473 (2011) *Nature* 212–215
- Windbichler, Nikolai/Papathanos, Philippos Aris/Crisanti, Andrea, Targeting the X Chromosome During Spermatogenesis Induces Y Chromosome Transmission Ratio Distortion and Early Dominant Embryo Lethality in *Anopheles Gambiae*, 4 (2008) *PLOS Genetics* e1000291
- Winter, G./Jans, J. H./Macrory, R./Kramer, L., Weighing up the EC Environmental Liability Directive, 20 (2008) *J. Env't'l L.* 163–191

- Wittich, Stephan, Compensation, in: Rüdiger Wolfrum/Anne Peters (eds.), Max Planck Encyclopedia of Public International Law, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Punitive Damages, in: James Crawford/Alain Pellet/Simon Olleson (eds.), The Law of International Responsibility (Oxford University Press, Oxford 2010), 667
- Wolf, Joachim, Gibt es im Völkerrecht einen einheitlichen Schadensbegriff?, 49 (1989) ZaöRV 403–444
- Wolfrum, Rüdiger/Möldner, Mirka, International Courts and Tribunals, Evidence, in: Rüdiger Wolfrum/Anne Peters (eds.), Max Planck Encyclopedia of Public International Law, Online Edition (Oxford University Press, Oxford 2008 et seq.)
- Woo, Je Wook/Kim, Jungeun/Kwon, Soon Il et al., DNA-Free Genome Editing in Plants with Preassembled CRISPR-Cas9 Ribonucleoproteins, 33 (2015) Nature Biotech. 1162
- World Mosquito Program, FAQ, available at: <https://www.worldmosquitoprogram.org/en/learn/faqs> (last accessed 28 May 2022)
- Our Wolbachia Method, available at: <https://www.worldmosquitoprogram.org/en/work/wolbachia-method> (last accessed 28 May 2022)
- World Organisation for Animal Health (OIE), Member Countries, available at: <https://www.woah.org/en/who-we-are/members/> (last accessed 28 May 2022)
- Our Missions, available at: <https://www.woah.org/en/who-we-are/mission/> (last accessed 28 May 2022)
- Role of the OIE in Improving Animal Health by Using Biotechnologies: OIE Bulletin 2007–4, available at: https://www.woah.org/fileadmin/Home/eng/Publications_&_Documentation/docs/pdf/bulletin/Bull_2007-4-ENG.pdf (last accessed 28 May 2022)
- World Trade Organization (WTO), Members and Observers, available at: https://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm (last accessed 28 May 2022)
- Xanat, Vargas Meza/Jiang, Ke/Barnett, George A./Park, Han Woo, International Trade of GMO-Related Agricultural Products, 52 (2018) Quality & Quantity 565–587
- Xiang, Wen, International Liability and Redress for Genetically Modified Organisms and Challenge for China's Biosafety Regulation, in: Vasilka Sancin/Maša Kovič Dine (eds.), International Environmental Law: Contemporary Concerns and Challenges (GV založba, Ljubljana 2012), 581–600
- Xiao, An/Wang, Zhanxiang/Hu, Yingying et al., Chromosomal Deletions and Inversions Mediated by TALENs and CRISPR/Cas in Zebrafish, 41 (2013) Nucleic Acids Res. e141
- Xiaoyi, Jiang/Jianwei, Zhang, Marine Environment and the International Tribunal for the Law of the Sea: Twenty Years' Practices and Prospects, 5 (2017) China Legal Science 84–110
- Xue, Hanqin, Transboundary Damage in International Law (Cambridge University Press, Cambridge 2003)

- Yamamoto, D. S./Nagumo, H./Yoshida, S.*, Flying Vaccinator; a Transgenic Mosquito Delivers a Leishmania Vaccine via Blood Feeding, 19 (2010) *Insect Molecular Biology* 391–398
- Yao, Franck Adama/Millogo, Abdoul-Azize/Epopa, Patric Stephane et al.*, Mark-Release-Recapture Experiment in Burkina Faso Demonstrates Reduced Fitness and Dispersal of Genetically-Modified Sterile Malaria Mosquitoes, 13 (2022) *Nature Comms.* 796
- Yen, Shuo-Ting/Zhang, Min/Deng, Jian Min et al.*, Somatic Mosaicism and Allele Complexity Induced by CRISPR/Cas9 RNA Injections in Mouse Zygotes, 393 (2014) *Developmental Biology* 3–9
- Yifru, Worku Damena/Fujii, Mai/Garforth, Kathryn*, The Decision-Making Procedures of the Protocol, in: Marie-Claire Cordonier Segger/Frederic Perron-Welch/Christine Frison (eds.), *Legal Aspects of Implementing the Cartagena Protocol on Biosafety* (Cambridge University Press, Cambridge 2013), 78–88
- Yifru, Worku Damena/Garforth, Kathryn*, The Supplementary Protocol: A Treaty Subject to Domestic Law?, in: Akiho Shibata (ed.), *International Liability Regime for Biodiversity Damage. The Nagoya-Kuala Lumpur Supplementary Protocol* (Taylor & Francis, London 2014), 150–165
- Yifru, Worku Damena/Garforth, Kathryn/Scarone, Paola*, Review of Issues, Instruments and Practices Relevant to Liability and Redress for Damage Resulting from Transboundary Movements of Living Modified Organisms, *CBD Biosafety Technical Series 03* (Montreal 2012)
- Yin, Hao/Xue, Wen/Chen, Sidi et al.*, Genome Editing with Cas9 in Adult Mice Corrects a Disease Mutation and Phenotype, 32 (2014) *Nature Biotech.* 551
- Young, Tomme Rosanne*, National Experiences with Legislative Implementation of the Protocol, in: Marie-Claire Cordonier Segger/Frederic Perron-Welch/Christine Frison (eds.), *Legal Aspects of Implementing the Cartagena Protocol on Biosafety* (Cambridge University Press, Cambridge 2013), 329–387
- Use of the Biosafety Clearing-House in Practice, in: Marie-Claire Cordonier Segger/Frederic Perron-Welch/Christine Frison (eds.), *Legal Aspects of Implementing the Cartagena Protocol on Biosafety* (Cambridge University Press, Cambridge 2013), 137–146
- Recognition of “Environmental Services” in the ICJ’s First Award of Compensation for International Environmental Damage, 48 (2018) *Environmental Policy and Law* 36–41
- Youssoufian, Hagop/Pyeritz, Reed E.*, Human Genetics and Disease: Mechanisms and Consequences of Somatic Mosaicism in Humans, 3 (2002) *Nature Rev. Genet.* 748
- Zahar, Alexander*, Methodological Issues in Climate Law, 5 (2015) *Climate Law* 25–34
- Zambrano, Diego*, A Comity of Errors: The Rise, Fall, and Return of International Comity in Transnational Discovery, 34 (2016) *Berkeley Journal of International Law* 101–159

- Zarrilli, Simonetta*, International Trade in GMOs and GM Products: National and Multilateral Legal Frameworks (United Nations, New York/Geneva 2005)
- Zeidan, Sayed Mohamed Mohamed*, State Responsibility and Liability for Environmental Damage Caused by Nuclear Accidents (Tilburg University, Tilburg 2012)
- Zetsche, Bernd/Gootenberg, Jonathan S./Abudayyeh, Omar O. et al.*, Cpf1 Is a Single RNA-Guided Endonuclease of a Class 2 CRISPR-Cas System, 163 (2015) Cell 759–771
- Zhang, Sarah*, No One Knows Exactly What Would Happen If Mosquitoes Were to Disappear, The Atlantic, 24 September 2018, available at: <https://www.theatlantic.com/science/archive/2018/09/mosquito-target-malaria/570937/> (last accessed 28 May 2022)
- Zhang, Xiao-Hui/Tee, Louis Y./Wang, Xiao-Gang/Huang, Qun-Shan/Yang, Shi-Hua*, Off-Target Effects in CRISPR/Cas9-Mediated Genome Engineering, 4 (2015) Molecular Therapy – Nucleic Acids e264
- Zhang, Zhao/Zhang, Yuelin/Gao, Fei et al.*, CRISPR/Cas9 Genome-Editing System in Human Stem Cells: Current Status and Future Prospects, 9 (2017) Molecular Therapy – Nucleic Acids 230–241
- Zhong, Guocai/Wang, Haimin/Li, Yujun/Tran, Mai H./Farzan, Michael*, Cpf1 Proteins Excise CRISPR RNAs from MRNA Transcripts in Mammalian Cells, 13 (2017) Nature Chemical Biology 839
- Zhou, Hong/Zhou, Michael/Li, Daisy et al.*, Whole Genome Analysis of CRISPR Cas9 SgRNA Off-Target Homologies via an Efficient Computational Algorithm, 18 (2017) BMC Genomics 826
- Zhou, Huanbin/Liu, Bo/Weeks, Donald P./Spalding, Martin H./Yang, Bing*, Large Chromosomal Deletions and Heritable Small Genetic Changes Induced by CRISPR/Cas9 in Rice, 42 (2014) Nucleic Acids Res. 10903–10914
- Zuccaro, Michael V./Xu, Jia/Mitchell, Carl et al.*, Allele-Specific Chromosome Removal After Cas9 Cleavage in Human Embryos, 183 (2020) Cell 1650–1664.e15
- Zuleeg, Manfred*, Vertragskonkurrenz im Völkerrecht: Teil I: Verträge zwischen souveränen Staaten, 20 (1977) German YBIL 246