



## Meagan Mauter

Associate Professor of Photon Science, Senior Fellow at the Woods Institute for the Environment and at the Precourt Institute for Energy and Associate Professor, by courtesy, of Chemical Engineering

Photon Science Directorate

### CONTACT INFORMATION

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### Bio

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#### BIO

Professor Meagan Mauter is appointed as an Associate Professor of Civil & Environmental Engineering and as a Center Fellow, by courtesy, in the Woods Institute for the Environment. She directs the Water and Energy Efficiency for the Environment Lab (WE3Lab) with the mission of providing sustainable water supply in a carbon-constrained world through innovation in water treatment technology, optimization of water management practices, and redesign of water policies. Ongoing research efforts include: 1) developing automated, precise, robust, intensified, modular, and electrified (A-PRIME) water desalination technologies to support a circular water economy, 2) identifying synergies and addressing barriers to coordinated operation of decarbonized water and energy systems, and 3) supporting the design and enforcement of water-energy policies.

Professor Mauter also serves as the research director for the National Alliance for Water Innovation, a \$110-million DOE Energy-Water Desalination Hub addressing water security issues in the United States. The Hub targets early-stage research and development of energy-efficient and cost-competitive technologies for desalinating non-traditional source waters.

Professor Mauter holds bachelors degrees in Civil & Environmental Engineering and History from Rice University, a Masters of Environmental Engineering from Rice University, and a PhD in Chemical and Environmental Engineering from Yale University. Prior to joining the faculty at Stanford, she served as an Energy Technology Innovation Policy Fellow at the Belfer Center for Science and International Affairs and the Mossavar Rahmani Center for Business and Government at the Harvard Kennedy School of Government and as an Associate Professor of Engineering & Public Policy, Civil & Environmental Engineering, and Chemical Engineering at Carnegie Mellon University.

#### ACADEMIC APPOINTMENTS

- Associate Professor, Photon Science Directorate
- Senior Fellow, Stanford Woods Institute for the Environment
- Senior Fellow, Precourt Institute for Energy
- Associate Professor (By courtesy), Chemical Engineering

## **ADMINISTRATIVE APPOINTMENTS**

- Research Director, National Alliance for Water Innovation, (2018- present)

## **HONORS AND AWARDS**

- Sustainable Chemistry & Engineering Lectureship Award, American Chemical Society (2021)
- Walter L. Huber Civil Engineering Research Prize, American Society of Civil Engineers (2021)
- Outstanding Reviewer, Environmental Science: Water Research & Technology (2018)
- Awardee, James J. Morgan Environmental Science & Technology Early Career Award Lectureship (2017)
- Co-Organizer and Participant, German American Frontiers of Engineering Symposium (2017)
- Participant, Arab-American Frontiers of Science, Engineering, and Medicine (2017)
- Recipient, Dean of Engineering Early Career Fellow (2017)
- Participant and Speaker, US-EU Frontiers of Engineering Symposium (2016)
- Recipient, NSF CAREER Award, Environmental Engineering (2016)
- Recipient, ASCE ExCEEEd Teaching Fellowship Award (2016)
- Recipient, George Tallman Ladd Research Award (2016)
- Recipient, North American Membrane Society (NAMS) Young Membrane Scientist Award (2015)
- Participant, National Academy of Engineering, Frontiers of Engineering Symposium (2012)
- Recipient, AWWA Academic Achieve Award, 1st Place Doctoral Dissertation (2012)
- Recipient with Honorable Mention, AEESP Outstanding Doctoral Dissertation Award (2012)
- Fellow, NSF Science Engineering and Education for Sustainability (SEES) (2011-2012)
- Recipient, AWWA Abel Wolman Fellowship (2009-2011)
- Recipient, NSF Graduate Research Fellowship (2006-2009)
- Recipient, US EPA GRO Fellowship (2004-2006)

## **BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS**

- Editorial Advisory Board, Environmental Science & Technology Letters (2020 - present)
- Editorial Advisory Board, ACS ES&T Engineering (2020 - present)
- Editorial Advisory Board, ACS Sustainable Chemistry and Engineering (2018 - present)
- Co-Chair, North American Membrane Society Annual Meeting (2017 - 2019)
- Advisory Board Member, Advanced Sustainable Systems (2016 - present)
- Editor, Sustainable Production and Consumption (2016 - present)
- Early Career Advisory Board Member, ACS Sustainable Chemistry and Engineering (2016 - 2018)

## **PROFESSIONAL EDUCATION**

- PhD, Yale University , Chemical and Environmental Engineering (2011)
- MS and M. Phil, Yale University , Chemical and Environmental Engineering (2007)
- MEE, Rice University , Environmental Engineering (2006)
- BS, Rice University , Civil & Environmental Engineering (2006)
- BA, Rice University , History (2006)

## Teaching

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### COURSES

#### 2023-24

- Modern Modeling Techniques for Water and Wastewater Systems: CEE 273T (Sum)

#### 2022-23

- Desalination for a Circular Water Economy: CEE 273M (Spr)
- Environmental Policy Analysis: CEE 275D (Aut)
- Modern Modeling Techniques for Water and Wastewater Systems: CEE 273T (Win, Sum)

#### 2021-22

- Environmental Engineering Seminar: CEE 269B (Win)
- Water & the Environment: Current Challenges and Solutions: CEE 177E, CEE 277E (Spr)

#### 2020-21

- Desalination for a Circular Water Economy: CEE 273M (Spr)

### STANFORD ADVISEES

#### Postdoctoral Faculty Sponsor

Jose Bolorinos, Erin Musabandesu, Laxmicharan Samineni

#### Doctoral Dissertation Advisor (AC)

Akshay Rao, Carson Tucker, Corisa Wong

#### Master's Program Advisor

Rachel Merrifield, Chidanand Patel, Daly Wettermark

#### Doctoral (Program)

Sinan Abi Farraj, Caroline Adkins, Fletcher Chapin, Akshay Rao, Corisa Wong

## Publications

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### PUBLICATIONS

- **Electricity and natural gas tariffs at United States wastewater treatment plants.** *Scientific data*  
Chapin, F. T., Bolorinos, J., Mauter, M. S.  
2024; 11 (1): 113
- **The Future of Municipal Wastewater Reuse Concentrate Management: Drivers, Challenges, and Opportunities.** *Environmental science & technology*  
Finnerty, C. T., Childress, A. E., Hardy, K. M., Hoek, E. M., Mauter, M. S., Plumlee, M. H., Rose, J. B., Sobsey, M. D., Westerhoff, P., Alvarez, P. J., Elimelech, M.  
2024; 58 (1): 3-16
- **Integrated Energy Flexibility Management at Wastewater Treatment Facilities.** *Environmental science & technology*  
Bolorinos, J., Mauter, M. S., Rajagopal, R.  
2023
- **Assessing the economic viability of unconventional rare earth element feedstocks** *NATURE SUSTAINABILITY*  
Fritz, A. G., Tarka, T. J., Mauter, M. S.  
2023

- **Novel method for accurately estimating membrane transport properties and mass transfer coefficients in reverse osmosis** *JOURNAL OF MEMBRANE SCIENCE*  
Liang, Y., Dudchenko, A., Mauter, M. S.  
2023; 679
- **Multi-scale planning model for robust urban drought response** *ENVIRONMENTAL RESEARCH LETTERS*  
Zaniolo, M., Fletcher, S., Mauter, M. S.  
2023; 18 (5)
- **Fixing the desalination membrane pipeline.** *Science (New York, N.Y.)*  
McCutcheon, J. R., Mauter, M. S.  
2023; 380 (6642): 242-244
- **Inadequacy of current approaches for characterizing membrane transport properties at high salinities** *JOURNAL OF MEMBRANE SCIENCE*  
Liang, Y., Dudchenko, A. V., Mauter, M. S.  
2023; 668
- **FIND: A Synthetic weather generator to control drought Frequency, Intensity, and Duration** *ENVIRONMENTAL MODELLING & SOFTWARE*  
Zaniolo, M., Fletcher, S., Mauter, M.  
2023; 172
- **High-Resolution Carbon Accounting Framework for Urban Water Supply Systems.** *Environmental science & technology*  
Liu, Y., Mauter, M. S.  
2022
- **Energy-Optimal Siting of Decentralized Water Recycling Systems.** *Environmental science & technology*  
Liu, Y., Sim, A., Mauter, M. S.  
2021
- **High-impact innovations for high-salinity membrane desalination.** *Proceedings of the National Academy of Sciences of the United States of America*  
Dudchenko, A. V., Bartholomew, T. V., Mauter, M. S.  
2021; 118 (37)
- **Marginal energy intensity of water supply** *ENERGY & ENVIRONMENTAL SCIENCE*  
Liu, Y., Mauter, M. S.  
2021
- **Cost Comparison of Capacitive Deionization and Reverse Osmosis for Brackish Water Desalination** *ACS ENVIRONMENTAL SCIENCE AND TECHNOLOGY ENGINEERING*  
Liu, X., Shanbhag, S., Bartholomew, T., Whitacre, J. F., Mauter, M. S.  
2021; 1 (2): 261-273
- **Build back wiser.** *Science (New York, N.Y.)*  
Mauter, M. S.  
2021; 373 (6562): 1417
- **Desalination for a circular water economy** *ENERGY & ENVIRONMENTAL SCIENCE*  
Mauter, M. S., Fiske, P. S.  
2020; 13 (10): 3180-84
- **Neural networks for estimating physical parameters in membrane distillation** *JOURNAL OF MEMBRANE SCIENCE*  
Dudchenko, A. V., Mauter, M. S.  
2020; 610
- **Optimization Framework to Assess the Demand Response Capacity of a Water Distribution System** *JOURNAL OF WATER RESOURCES PLANNING AND MANAGEMENT*  
Liu, Y., Barrows, C., Macknick, J., Mauter, M.  
2020; 146 (8)
- **Quantifying uncertainty in groundwater depth from sparse well data in the California Central Valley** *ENVIRONMENTAL RESEARCH LETTERS*

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- Quay, A. N., Hering, A. S., Mauter, M. S.  
2020; 15 (8)
- **Assessing the demand response capacity of US drinking water treatment plants** *APPLIED ENERGY*  
Liu, Y., Mauter, M. S.  
2020; 267
  - **Environmentally significant shifts in trace element emissions from coal plants complying with the 1990 Clean Air Act Amendments** *ENERGY POLICY*  
Gingerich, D. B., Zhao, Y., Mauter, M. S.  
2019; 132: 1206–15
  - **Computational framework for modeling membrane processes without process and solution property simplifications** *JOURNAL OF MEMBRANE SCIENCE*  
Bartholomew, T. V., Mauter, M. S.  
2019; 573: 682–93
  - **The role of nanotechnology in tackling global water challenges** *NATURE SUSTAINABILITY*  
Mauter, M. S., Zucker, I., Perreault, F., Werber, J. R., Kim, J., Elimelech, M.  
2018; 1 (4): 166–75
  - **Economic and policy drivers of agricultural water desalination in California's central valley** *AGRICULTURAL WATER MANAGEMENT*  
Welle, P. D., Medellin-Azuara, J., Viers, J. H., Mauter, M. S.  
2017; 194: 192–203
  - **Osmotically assisted reverse osmosis for high salinity brine treatment** *DESALINATION*  
Bartholomew, T. V., Mey, L., Arena, J. T., Siefert, N. S., Mauter, M. S.  
2017; 421: 3–11
  - **Air Emissions Damages from Municipal Drinking Water Treatment Under Current and Proposed Regulatory Standards** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*  
Gingerich, D. B., Mauter, M. S.  
2017; 51 (18): 10299–306
  - **High-resolution model for estimating the economic and policy implications of agricultural soil salinization in California** *ENVIRONMENTAL RESEARCH LETTERS*  
Welle, P. D., Mauter, M. S.  
2017; 12 (9)
  - **Management and dewatering of brines extracted from geologic carbon storage sites** *INTERNATIONAL JOURNAL OF GREENHOUSE GAS CONTROL*  
Arena, J. T., Jain, J. C., Lopano, C. L., Hakala, J., Bartholomew, T. V., Mauter, M. S., Siefert, N. S.  
2017; 63: 194–214
  - **Spatially resolved air-water emissions tradeoffs improve regulatory impact analyses for electricity generation** *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA*  
Gingerich, D. B., Sun, X., Behrer, A., Azevedo, I. L., Mauter, M. S.  
2017; 114 (8): 1862–67
  - **Magnetically Directed Two-Dimensional Crystallization of OmpF Membrane Proteins in Block Copolymers** *JOURNAL OF THE AMERICAN CHEMICAL SOCIETY*  
Klara, S. S., Saboe, P. O., Sines, I. T., Babaei, M., Chiu, P., DeZorzi, R., Dayal, K., Walz, T., Kumar, M., Mauter, M. S.  
2016; 138 (1): 28–31
  - **Multicriteria Suitability Index for Prioritizing Early-Stage Deployments of Wastewater-Derived Fertilizers in Sub-Saharan Africa.** *Environmental science & technology*  
Wong, C. A., Lobell, D. B., Mauter, M. S.  
2023
  - **Fouling of Reverse Osmosis Membrane with Effluent Organic Matter: Componential Role of Hydrophobicity** *ACS ES&T WATER*  
Stein, N., Sharon-Gojman, R., Mauter, M. S., Bernstein, R., Herzberg, M.  
2023

- **Microporous Polyethersulfone Membranes Grafted with Zwitterionic Polymer Brushes Showing Microfiltration Permeance and Ultrafiltration Bacteriophage Removal.** *ACS applied materials & interfaces*  
Qin, J., Ziemann, E., Bar-Zeev, E., Bone, S. E., Liang, Y., Mauter, M. S., Herzberg, M., Bernstein, R.  
2023
- **Comparative Infrared Microscopy for Measuring Membrane Thermal Conductivity and Validating Theoretical Heat Transport Models** *ACS ES&T ENGINEERING*  
Liu, T., Mauter, M. S.  
2023
- **Aqueous Bromide Discharges from US Coal-Fired Power Plants: Points of Origin, Concentration Ranges, and Effluent Treatment Costs** *ENERGY & FUELS*  
Fritz, A. G., Able, C., Mauter, M. S., Grol, E.  
2023
- **Unraveling pH Effects on Ultrafiltration Membrane Fouling by Extracellular Polymeric Substances: Adsorption and Conformation Analyzed with Localized Surface Plasmon Resonance.** *Environmental science & technology*  
Ran, N., Sharon-Gojman, R., Larsson, S., Gillor, O., Mauter, M. S., Herzberg, M.  
2022
- **Effects of meteorological and land surface modeling uncertainty on errors in winegrape ET calculated with SIMS** *IRRIGATION SCIENCE*  
Doherty, C. T., Johnson, L. F., Volk, J., Mauter, M. S., Bambach, N., McElrone, A. J., Alfieri, J. G., Hipps, L. E., Prueger, J. H., Castro, S. J., Alsina, M., Kustas, W. P., Melton, et al  
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- **Effects of meteorological and land surface modeling uncertainty on errors in winegrape ET calculated with SIMS.** *Irrigation science*  
Doherty, C. T., Johnson, L. F., Volk, J., Mauter, M. S., Bambach, N., McElrone, A. J., Alfieri, J. G., Hipps, L. E., Prueger, J. H., Castro, S. J., Alsina, M. M., Kustas, W. P., Melton, et al  
2022; 40 (4-5): 515-530
- **Heat transfer innovations and their application in thermal desalination processes** *JOULE*  
Liu, T., Mauter, M. S.  
2022; 6 (6): 1199-1229
- **Guidance on Nusselt Number Correlation Selection in Membrane Distillation** *ACS ES&T ENGINEERING*  
Dudchenko, A. V., Hardikar, M., Anand, A., Xin, R., Wang, R., Gopu, C., Mauter, M. S.  
2022
- **Recommendations for Advancing FAIR and Open Data Standards in the Water Treatment Community** *ACS ES&T ENGINEERING*  
Quay, A. N., Fiske, P. S., Mauter, M. S.  
2022; 2 (3): 337-346
- **Carbon Benefits of Drinking Water Treatment Electrification** *ACS ES&T ENGINEERING*  
Gingerich, D. B., Liu, J., Mauter, M. S.  
2022; 2 (3): 367-376
- **Technology Baselines and Innovation Priorities for Securing Water Supply** *ACS ES&T ENGINEERING*  
Mauter, M. S., Dionysiou, D. D., Kim, J.  
2022; 2 (3): 271-272
- **Desalination Process Design Assisted by Osmotic Power for High Water Recovery and Low Energy Consumption** *ACS SUSTAINABLE CHEMISTRY & ENGINEERING*  
Touati, K., Dudchenko, A., Mauter, M. S., Rahaman, M.  
2022; 10 (7): 2409-2419
- **Technoeconomic Assessment of a Sequential Step-Leaching Process for Rare Earth Element Extraction from Acid Mine Drainage Precipitates** *ACS SUSTAINABLE CHEMISTRY & ENGINEERING*  
Fritz, A. G., Tarka, T. J., Mauter, M. S.  
2021; 9 (28): 9308-9316
- **The Economic Infeasibility of Salinity Gradient Energy via Pressure Retarded Osmosis** *ACS ES&T ENGINEERING*

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Newby, A. N., Bartholomew, T., Mauter, M. S.

2021; 1 (7): 1113-1121

- **Competing Ion Behavior in Direct Electrochemical Selenite Reduction** *ACS ES&T ENGINEERING*  
Zou, S., Mauter, M. S.  
2021; 1 (6): 1028-1035
- **Cost optimization of multi-stage gap membrane distillation** *JOURNAL OF MEMBRANE SCIENCE*  
Dudchenko, A., Bartholomew, T., Mauter, M. S.  
2021; 627
- **Cost and energy intensity of US potable water reuse systems** *ENVIRONMENTAL SCIENCE-WATER RESEARCH & TECHNOLOGY*  
Sim, A., Mauter, M. S.  
2021; 7 (4): 748-61
- **Real-time feedback improves multi-stakeholder design for complex environmental systems** *ENVIRONMENTAL RESEARCH COMMUNICATIONS*  
Guo, N., Davis, A., Mauter, M., Whitacre, J.  
2021; 3 (4)
- **Energy and CO2 Emissions Penalty Ranges for Geologic Carbon Storage Brine Management.** *Environmental science & technology*  
Bartholomew, T. V., Mauter, M. S.  
2021
- **Direct Electrochemical Pathways for Selenium Reduction in Aqueous Solutions** *ACS SUSTAINABLE CHEMISTRY & ENGINEERING*  
Zou, S., Mauter, M. S.  
2021; 9 (5): 2027-36
- **Performance Loss of Activated Carbon Electrodes in Capacitive Deionization: Mechanisms and Material Property Predictors.** *Environmental science & technology*  
Liu, X., Shanbhag, S., Natesakhawat, S., Whitacre, J. F., Mauter, M. S.  
2020
- **Foulant Adsorption to Heterogeneous Surfaces with Zwitterionic Nanoscale Domains** *ACS APPLIED POLYMER MATERIALS*  
Dudchenko, A., Bengani-Lutz, P., Asatekin, A., Mauter, M. S.  
2020; 2 (11): 4709-18
- **Cost optimization of high recovery single stage gap membrane distillation** *JOURNAL OF MEMBRANE SCIENCE*  
Bartholomew, T. V., Dudchenko, A. V., Siefert, N. S., Mauter, M. S.  
2020; 611
- **Flue Gas Desulfurization Wastewater Composition and Implications for Regulatory and Treatment Train Design.** *Environmental science & technology*  
Gingerich, D. B., Mauter, M. S.  
2020
- **Impact of module design on heat transfer in membrane distillation** *JOURNAL OF MEMBRANE SCIENCE*  
Dudchenko, A. V., Hardikar, M., Xin, R., Joshi, S., Wang, R., Sharma, N., Mauter, M. S.  
2020; 601
- **Bacterial biofilm formation on ion exchange membranes** *JOURNAL OF MEMBRANE SCIENCE*  
Herzberg, M., Pandit, S., Mauter, M. S., Oren, Y.  
2020; 596
- **Magnetic Field-Induced Alignment of Nanofibrous Supramolecular Membranes: A Molecular Design Approach to Create Tissue-like Biomaterials.** *ACS applied materials & interfaces*  
Radvar, E. n., Shi, Y. n., Grasso, S. n., Edwards-Gayle, C. J., Liu, X. n., Mauter, M. S., Castelletto, V. n., Hamley, I. W., Reece, M. J., S Azevedo, H. n.  
2020
- **Understanding and mitigating performance decline in electrochemical deionization** *CURRENT OPINION IN CHEMICAL ENGINEERING*  
Liu, X., Shanbhag, S., Mauter, M. S.  
2019; 25: 67-74

- **Managing high salinity brines from geological carbon sequestration**  
Mauter, M.  
AMER CHEMICAL SOC.2019
- **Trace Element Mass Flow Rates from US Coal Fired Power Plants** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*  
Sun, X., Gingerich, D. B., Azevedo, I. L., Mauter, M. S.  
2019; 53 (10): 5585–95
- **Zwitterionic copolymer additive architecture affects membrane performance: fouling resistance and surface rearrangement in saline solutions** *JOURNAL OF MATERIALS CHEMISTRY A*  
Kaner, P., Dudchenko, A. V., Mauter, M. S., Asatekin, A.  
2019; 7 (9): 4829–46
- **Mechanisms of Humic Acid Fouling on Capacitive and Insertion Electrodes for Electrochemical Desalination** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*  
Liu, X., Whitacre, J. F., Mauter, M. S.  
2018; 52 (21): 12633–41
- **Cost Optimization of Osmotically Assisted Reverse Osmosis** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*  
Bartholomew, T., Siefert, N. S., Mauter, M. S.  
2018; 52 (20): 11813–21
- **Fundamental challenges and engineering opportunities in flue gas desulfurization wastewater treatment at coal fired power plants** *ENVIRONMENTAL SCIENCE-WATER RESEARCH & TECHNOLOGY*  
Gingerich, D. B., Grol, E., Mauter, M. S.  
2018; 4 (7): 909–25
- **Outstanding Reviewers for Environmental Science: Water Research & Technology in 2017** *ENVIRONMENTAL SCIENCE-WATER RESEARCH & TECHNOLOGY*  
Bagley, D., Chung, N., He, Z., Julian, T., Lee, Y., Mauter, M., Nghiem, L., Rodrigues, D., Wammer, K., Ward, B., Zhang, Q.  
2018; 4 (6): 760
- **ACS Sustainable Chemistry & Engineering Virtual Special Issue on Systems Analysis, Design, and Optimization for Sustainability** *ACS SUSTAINABLE CHEMISTRY & ENGINEERING*  
Cabezas, H., Mauter, M. S., Shonnard, D., You, F.  
2018; 6 (6): 7199
- **Air Emission Reduction Benefits of Biogas Electricity Generation at Municipal Wastewater Treatment Plants** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*  
Gingerich, D. B., Mauter, M. S.  
2018; 52 (3): 1633–43
- **Technoeconomic Optimization of Emerging Technologies for Regulatory Analysis** *ACS SUSTAINABLE CHEMISTRY & ENGINEERING*  
Gingerich, D. B., Bartholomew, T. V., Mauter, M. S.  
2018; 6 (2): 2370–78
- **Retrofitting the Regulated Power Plant: Optimizing Energy Allocation to Electricity Generation, Water Treatment, and Carbon Capture Processes at Coal-Fired Generating Facilities** *ACS SUSTAINABLE CHEMISTRY & ENGINEERING*  
Gingerich, D. B., Mauter, M. S.  
2018; 6 (2): 2694–2703
- **Characterizing convective heat transfer coefficients in membrane distillation cassettes** *JOURNAL OF MEMBRANE SCIENCE*  
Leitch, M. E., Lowry, G. V., Mauter, M. S.  
2017; 538: 108–21
- **Influence of Electric Fields on Biofouling of Carbonaceous Electrodes** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*  
Pandit, S., Shanbhag, S., Mauter, M., Oren, Y., Herzberg, M.  
2017; 51 (17): 10022–30
- **Computing the Diamagnetic Susceptibility and Diamagnetic Anisotropy of Membrane Proteins from Structural Subunits** *JOURNAL OF CHEMICAL THEORY AND COMPUTATION*



- Babaei, M., Jones, I. C., Dayal, K., Mauter, M. S.  
2017; 13 (6): 2945–53
- **Allocating Damage Compensation in a Federalist System: Lessons from Spatially Resolved Air Emissions in the Marcellus** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*  
Behrer, A., Mauter, M. S.  
2017; 51 (7): 3600–3608
  - **Working on environmental challenges as an engineer gone wrong**  
Mauter, M.  
AMER CHEMICAL SOC.2017
  - **Accurately determining convective heat transfer coefficients in membrane distillation cassettes**  
Mauter, M., Leitch, M., Lowry, G.  
AMER CHEMICAL SOC.2017
  - **Nanotechnology for sustainable food production: promising opportunities and scientific challenges** *ENVIRONMENTAL SCIENCE-NANO*  
Rodrigues, S. M., Demokritou, P., Dokoozlian, N., Hendren, C., Karn, B., Mauter, M. S., Sadik, O. A., Safarpour, M., Unrine, J. M., Viers, J., Welle, P., White, J. C., Wiesner, et al  
2017; 4 (4): 767–81
  - **Air emission implications of expanded wastewater treatment at coal-fired generators**  
Gingerich, D., Sun, X., Behrer, A., Azevedo, I., Mauter, M.  
AMER CHEMICAL SOC.2016
  - **Techno-economic assessment of desalination technology for application in agriculture**  
Welle, P., Azuara, J., Viers, J., Mauter, M.  
AMER CHEMICAL SOC.2016
  - **Multi-objective optimization model for minimizing cost and environmental impact in shale gas water and wastewater management**  
Bartholomew, T., Mauter, M.  
AMER CHEMICAL SOC.2016
  - **Relating charge efficiency and ion removal in electrochemical deionization systems**  
Shanbhag, S., Whitacre, J., Mauter, M.  
AMER CHEMICAL SOC.2016
  - **Modeling convective and diffusive mass transport in capacitive deionization electrodes**  
Iddya, A., Mauter, M., Shanbhag, S.  
AMER CHEMICAL SOC.2016
  - **Trace element allocation across air pollution control devices in coal fired power plants**  
Sun, X., Gingerich, D., Azevedo, I., Mauter, M.  
AMER CHEMICAL SOC.2016
  - **Multiobjective Optimization Model for Minimizing Cost and Environmental Impact in Shale Gas Water and Wastewater Management** *ACS SUSTAINABLE CHEMISTRY & ENGINEERING*  
Bartholomew, T. V., Mauter, M. S.  
2016; 4 (7): 3728–35
  - **Surface Wetting Study via Pseudocontinuum Modeling** *JOURNAL OF PHYSICAL CHEMISTRY C*  
Makaremi, M., Jhon, M. S., Mauter, M. S., Biegler, L. T.  
2016; 120 (21): 11528–34
  - **Bacterial Nanocellulose Aerogel Membranes: Novel High-Porosity Materials for Membrane Distillation** *ENVIRONMENTAL SCIENCE & TECHNOLOGY LETTERS*  
Leitch, M. E., Li, C., Ikkala, O., Mauter, M. S., Lowry, G. V.  
2016; 3 (3): 85–91
  - **Influence of surface charge on the rate, extent, and structure of adsorbed Bovine Serum Albumin to gold electrodes** *JOURNAL OF COLLOID AND INTERFACE SCIENCE*

- Beykal, B., Herzberg, M., Oren, Y., Mauter, M. S.  
2015; 460: 321–28
- **Electrodeposited MnO<sub>2</sub> For Pseudocapacitive Deionization: Relating Deposition Condition and Electrode Structure to Performance** *ELECTROCHIMICA ACTA*  
Walker, P. J., Mauter, M. S., Whitacre, J. F.  
2015; 182: 1008-1018
  - **Quantity, Quality, and Availability of Waste Heat from United States Thermal Power Generation** *ENVIRONMENTAL SCIENCE & TECHNOLOGY*  
Gingerich, D. B., Mauter, M. S.  
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- Leveraging High Resolution Information for Sustainable Food Energy Water Systems (2018)
- Retrofitting the Regulated Power Plant: Integrated health, environmental, and climate decision making for infrastructure investments (2018)
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- Evaluating the Techno-Economic Feasibility of Waste-heat Driven Water Treatment at Electric Power Generation Facilities (October 2015)
- Valuing (Nano) Technology's Benefits for Agriculture: A Techno-Economic Assessment of Agricultural Water Desalination in the Central Valley of CA (October 2015)
- Magnetically Directed Self-Assembly for the Fabrication of Ultra-Selective Membrane Materials (2015)
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