



The American Membrane Technology Association (AMTA) and the U.S. Bureau of Reclamation are pleased to announce the 2022 recipients of the **AMTA/Reclamation Fellowships for Membrane Technology**. The four recipients undertaking cutting-edge and innovative research in universities across the country will receive a \$11,750 fellowship to support their research advancing membrane technology in the water, wastewater, or water reuse industries.

2022 recipients of AMTA/Reclamation Fellowships for Membrane Technology are:

**Dr. Maryam Amouamouha**, South Dakota School of Mines & Technology

Amouamouha is a Ph.D. student researching *Investigation of the Performance of Centrifugal Spinning Nanofiber Membranes Functionalized with Graphene Oxide-Silver for Wastewater Treatment* under the guidance of Travis Walker, Ph.D. Amouamouha earned a Ph.D. in Environmental Engineering from Shahid Beheshti University, Tehran, Iran. The objective of her work is to develop highly efficient and cost-effective ultrafiltration (UF) membranes from centrifugal fibers alone without using expensive/complicated chemical modification methods.

“Maryam has proven to be an invaluable asset, as I build my research group. Her ongoing research will continue to set the stage for a number of possible future research projects.”

Travis W. Walker, Ph.D., Associate Professor

Karen M. Swindler Department of Chemical and Biological Engineering  
South Dakota School of Mines & Technology

**Shao-Hsiang (Joe) Hung**, University of Massachusetts Amhers

Hung is a Graduate Research Fellow studying *Fabrication of Polyelectrolyte Membranes via Sustainable Aqueous Phase Separation* under the guidance of Jessica Schiffman, Ph.D. Hung earned his B.S. and M.S. degrees in Chemical Engineering from the National Taiwan University and the University of Massachusetts Amherst, respectively. Hung’s research focuses on developing a mechanistic understanding of how to manufacture chemically robust, high-flux membranes from polyelectrolytes, water, and salt; and evaluate their stability, flux, and fouling resistance.

“Based on my observations, I am confident that Joe will be a highly successful graduate student and professional beyond his graduation from my lab; I look forward to Joe's future successes.”

Jessica Schiffman, Ph.D., Professor

Department of Chemical Engineering  
University of Massachusetts Amherst

**Harsh Patel**, University of Michigan Ann Arbor

Patel is a Graduate Research Assistant exploring *Novel Low Water Content Membranes with High Counterion/Counterion Selectivity for Applications in Desalination and Lithium Extraction* under the guidance of Jovan Kamcev, Ph.D. at University of Michigan. Patel’s research looks at

establishing novel low water content membranes capable of selectively removing targeted ions to meet rising water and energy demands.

“I am very excited to see Harsh drive this fascinating project, which could lead to breakthroughs in this vibrant research area.”

Jovan Kamcev, Ph.D., Assistant Professor  
Department of Chemical Engineering  
University of Michigan

**Siddhartha Paul, University of Houston**

Paul is a Graduate Research Assistant exploring *Chlorine-Resistant Covalent Organic Framework (COF) Membranes for Water and Wastewater Treatment* under the guidance of Devin Shaffer, Ph.D., P.E. at University of Houston. Paul earned a M.Tech. in Environmental Engineering from Indian Institute of Technology Guwahati and a B.Tech from the National Institute of Technology, Silchar. Paul is studying the chlorine-resistance of covalent organic framework nanofiltration membranes to address the persistent challenge of effectively cleaning conventional polyamide nanofiltration membranes to maintain their performance.

“I am confident in Siddhartha's abilities to advance knowledge about and applications of membrane technology through his research on COF nanofiltration membranes.”

Devin L. Shaffer, Ph.D., P.E., Assistant Professor  
Department of Civil and Environmental Engineering  
University of Houston

Advanced treatment of alternative water supplies is becoming increasingly critical for long-term water security, and most such alternatives—including brackish groundwater, seawater, and recycled wastewater—require both membrane filtration and desalination technology. Accordingly, innovations in membrane technology have significant potential to reduce the cost, energy, and environmental impact of advanced treatment, yielding clean, safe, abundant, and cost-effective water supplies in arid western states and across the United States.

AMTA and the U.S. Bureau of Reclamation are partnering to support graduate student fellowships that aid in the advancements needed to pursue innovation in membrane technologies. Reclamation forms partnerships with private industry, universities, water utilities, and others to address a broad range of desalting and water purification needs where research is of national significance and provides widespread benefits.

“AMTA would like to thank Reclamation for its ongoing generous support of AMTA's fellowship program, which has awarded \$680,000 to 65 of the membrane industry's brightest young leaders since 2007,” said Brent Alspach, AMTA's Fellowship Committee Chair. “Our collaboration continues to both advance the frontiers of membrane technology and support the next generation of leaders that will guide the industry into the future.”

As the leading professional association dedicated to membrane treatment technology and research, AMTA administers fellowships for university students to support academic scholarship and innovative membrane research, with more than \$680,000 awarded since 2007. Through partnership, this financial support not only yields cutting-edge innovations in membrane technology, but also provides career development for the industry's brightest young minds.

*The American Membrane Technology Association's mission is to promote, advocate and advance the understanding and application of membrane technology to create safe, affordable and reliable water treatment solutions. Visit [www.amtaorg.com](http://www.amtaorg.com) for more information.*

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