

# American Chemical Society

## ENVR Division Technical Program

Fall 2021 National Meeting

August 22-26, 2021

*Virender Sharma, Fall Program Chair; Christie Sayes, Asst. Fall Program Chair*

### Sunday 8/22/2021 – In-Person Session 2 / Virtual Session 1

10:30 AM - 12:30 PM (EDT)

#### **WISE: Women in Environmental Science & Engineering**

##### **Career Paths and Resilience**

Organizers: Dionysiou, Dionysios; University of Cincinnati|Sharma, Virender; Texas AM University

Oral – Virtual, Zoom Room 32

Resilient women: our collective role in advocating for each other and the future of environmental chemistry	Sharon Walker	10:30 AM
Why are women faculty in Europe lagging behind their colleagues in the U.S.?	Janet Hering	11:00 AM
Path of privilege, water, and microbes	Katherine McMahon	11:30 AM
Women do <i>amazing</i> science: Hear us you can too	Michelle Scherer	12:00 PM

### Sunday 8/22/2021 – In-Person Session 3 / Virtual Session 2

2:00 PM - 4:00 PM (EDT)

#### **WISE: Women in Environmental Science & Engineering**

##### **Career Paths and Resilience**

Organizers: Dionysiou, Dionysios; University of Cincinnati|Sharma, Virender; Texas AM University

Oral – Hybrid, Thomas Murphy Ballroom Sections 1 & 2 (Georgia World Congress Center)

Transformative work of women leaders in environmental science, technology and engineering	Sherine Obare	2:00 PM
Developing a community of fellowship in environmental chemistry	Lynn Katz	2:30 PM
Reluctant advocate: How a chemist learned to speak up for science and the environment	Kristen Kulinowski	3:00 PM
Simultaneous mitigation of greenhouse gases and heavy metal pollution with carbonate mineral precipitation	Catherine Peters	3:30 PM

## Sunday 8/22/2021 – In-Person Session 4 / Virtual Session 3

4:30 PM - 6:30 PM (EDT)

### **WISE: Women in Environmental Science & Engineering**

#### **Sensors, Materials, Interfaces and Nanotechnology**

Organizers: Dionysiou, Dionysios; University of Cincinnati | Sharma, Virender; Texas AM University

Oral – Virtual, Zoom Room 38

Reflections on sensor-mediated solutions that enhance sustainability, data transparency and access to quality water	Nancy Love	4:30 PM
Developing next generation real time <i>in situ</i> sensing towards intelligent water infrastructure	Baikun Li	5:00 PM
Extracting and quantifying rare earth, critical and precious elements in consumer electronics	Inez Hua	5:30 PM
Nucleation and nanoscale interfacial processes for resilient and sustainable water-energy systems	Young-Shin Jun	6:00 PM

## Sunday 8/22/2021 – Virtual Session 4

7:00 PM – 9:00 PM (EDT)

### **WISE: Women in Environmental Science & Engineering**

#### **Reactions and Analytical Environmental Chemistry**

Organizers: Dionysiou, Dionysios; University of Cincinnati | Sharma, Virender; Texas AM University

Oral – Virtual, Zoom Room 36

Mechanisms of sulfite-mediated advanced oxidation processes	Xiaohong Guan	7:00 PM
Multiplication through transformation	Linda Lee	7:30 PM
Now you see it, now you don't: Significance of transformation products of chemicals of emerging concern	Diana Aga	8:00 PM
Intrinsic supramolecular resilience of abiotic aqueous dissolved organic matter	Martha Wells	8:30 PM

## Monday 8/23/2021 – In-Person Session 1

8:00 AM - 10:00 AM (EDT)

### **WISE: Women in Environmental Science & Engineering**

#### **Environmental Chemistry Interfaces and Reactions**

Organizers: Dionysiou, Dionysios; University of Cincinnati | Sharma, Virender; Texas AM University

Oral – Hybrid, Thomas Murphy Ballroom Sections 1 & 2 (Georgia World Congress Center)

Chemistry and impacts of environmental interfaces	Vicki Grassian	8:00 AM
Compatibility of polyamide membranes with peracetic acid disinfectant: A comparative study with chlorine	Ning Dai	8:30 AM
Career focused on improving the safety of drinking water: New discoveries, potential risks, and promising solutions	Susan Richardson	9:00 AM
Advanced oxidation process with peracetic acid: Mechanism, modeling, and application	Ching-Hua Huang	9:30 AM

## Monday 8/23/2021 – In-Person Session 2 / Virtual Session 1

10:30 AM - 12:30 PM (EDT)

### **WISE: Women in Environmental Science & Engineering**

#### **Effects of Climate, Energy Extraction & Engineered Processes on Environmental Science & Policy**

Organizers: Dionysiou, Dionysios; University of Cincinnati | Sharma, Virender; Texas AM University

Oral – Virtual, Zoom Room 36

Climate change accelerates mobilization of rare earth elements in a mountain watershed in the Colorado Mineral Belt	Diane McKnight	10:30 AM
Fossil energy in a modern world: Managing impacts on water and climate from domestic energy extraction	Desiree Plata	11:00 AM
Environmental justice: Role of science, engineering, and policy in ensuring equity in urban water systems	Kimberly Jones	11:30 AM

## Monday 8/23/2021 – In-Person Session 3 / Virtual Session 2

2:00 PM - 4:00 PM (EDT)

### **WISE: Women in Environmental Science & Engineering**

#### **Biological Processes, Microbiome, and Public Health**

Organizers: Dionysiou, Dionysios; University of Cincinnati | Sharma, Virender; Texas AM University

Oral – Virtual, Zoom Room 35

Critical public health challenges call for our engagement: How can we help?	Barbara Turpin	2:00 PM
Manipulating treatments, water chemistry, and system design to limit proliferation of pathogens and antibiotic resistance in water systems: A microbiome perspective	Amy Pruden	2:30 PM
Management of nutrients and pathogens using hybrid adsorption biological treatment systems (HABITS)	Sarina Ergas	3:00 PM
Elevated temperatures in municipal solid waste landfills due to exothermic abiotic reactions	Debra Reinhart	3:30 PM

## Monday 8/23/2021 – In-Person Session 4 / Virtual Session 3

4:30 PM - 6:30 PM (EDT)

### **WISE: Women in Environmental Science & Engineering**

#### **Biological Processes, Microbiome, and Public Health**

Organizers: Dionysiou, Dionysios; University of Cincinnati | Sharma, Virender; Texas AM University

Oral – Hybrid, Thomas Murphy Ballroom Sections 1 & 2 (Georgia World Congress Center)

Building the toolbox to address the complexity of exposures and effects of emerging contaminants	Rebecca Klaper	4:30 PM
Influence of corrosion inhibitors on infection risk of <i>Legionella pneumophila</i> released from drinking water biofilms	Thanh Nguyen	5:00 PM
From ocean microbiome to wastewater microbiome: A journey through an invisible world	Sunny Jiang	5:30 PM
Fabrication of polymeric ultrafiltration membrane using green polymers and solvents	Isabel Escobar	6:00 PM

## Tuesday 8/24/2021 – In-Person Session 2 / Virtual Session 1

10:30 AM - 12:30 PM (EDT)

### **WISE: Women in Environmental Science & Engineering**

#### **Water Treatment and Reuse**

Organizers: Dionysiou, Dionysios; University of Cincinnati|Sharma, Virender; Texas AM University|Sayes, Christie; Baylor University

Oral – Virtual, Zoom Room 33

Removal of PAHs, PCBs, PFASs, and metals from stormwater using green infrastructure technologies	Staci Simonich	10:30 AM
Recent advances in electrodialysis for water reuse, desalination, and concentrate treatment	Pei Xu	11:00 AM
Potable water reuse and desalination: More salt, less energy	Amy Childress	11:30 AM
Quantitative tools for assessing research impact on water treatment's grand challenges	Meagan Mauter	12:00 PM