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Membrane processes for sustainable water purification @
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FEATURED MEMBERS

1. Career Path

I received my PhD in environmental engineering (2015) at Northwestern University, Evanston, after which I worked as a Postdoctoral Research Fellow at Yale University. Before coming to the U.S., I got my B.S. degree (2008) with honors in Environmental Engineering from Beijing Normal University and my M.S. degree (2010) in Environmental Science and Engineering from Tsinghua University. I joined the Department of Civil and Environmental Engineering at Colorado State University (CSU) as an assistant professor from 2017.

2. Research

My group applies interdisciplinary approach to improve sustainability at the water-energy-health nexus. My research interests include (i) design and development of novel membrane materials and processes for sustainable water supply; (ii) environmental applications and implications of nanotechnology; and (iii) resource recovery from wastewater treatment processes. Currently, we are working on fabricating wetting-resistant and scaling-resistant materials that are used in different membrane processes including membrane distillation (MD) and reverse osmosis (RO). We also investigate the mechanisms of mineral scaling in membrane desalination, and apply membrane technologies to the treatment and reuse of wastewater generated from unconventional energy production.

3. Teaching

I am teaching two courses at CSU: CIVE 530 Environmental Engineering at the Water-Energy-Health Nexus (which I designed at CSU) and CIVE 541 Environmental Operation Unit-Treatment-Design (equivalent to physicochemical processes of water treatment). My goal of teaching is simple: the students will understand and master something they did not know when they walk out of my courses, and that the knowledge they learned will help them to be in a better position in their career.

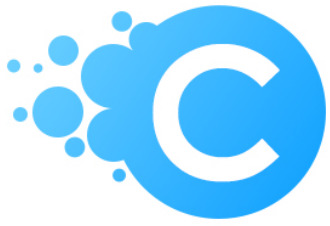
4. Professional Activities

I am a member of Association of Environmental Engineering and Science Professors (AEESP), American Chemistry Society (ACS), American Society of Civil Engineers (ASCE), and North American Membrane Society (NAMS). I often attend the Gordon Conference on membrane, the ACS National Meeting, and the NAMS annual meeting.

5. University, Area and Community

My university locates at Fort Collins, Colorado, which enjoys >300 days of sunshine and is nearby the Rocky Mountain National Park. Colorado is a perfect place for hiking and ski, where people are passionate on sports. We are also enriched with cultural stories in particular about gold mining and Native Americans.





CAPEES

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6. *More About Me*

I grew up in the city of Qingdao (or Tsingtao), a beautiful city located at the east seashore of China. My city was a German colony in 1890s until 1910s. Thus, Qingdao is famous for its European style buildings and (of course) the Tsingtao beer. When I needed to choose my major in college, I actually did not know what to do, and then selected environmental engineering because it is a multidisciplinary subject. I got participated in my first research project during my junior year, and fortunately it was working well and resulted in my first peer-reviewed publication. This experience made me confident of being a researcher in environmental engineering. Something funny about me? There are not many people who know the character of my Chinese family name correctly when they first met with me, even they are Chinese!



Dr. Tong's research group at Colorado State University.

