

SMS Fall 2021 O’Keeffe Inaugural

Friday Nov 19 | 2:30pm | Biodesign Auditorium

Omar Yaghi, PhD

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Dr. Omar M. Yaghi received his B.S. from State University of New York at Albany (1985) and Ph.D. in Inorganic Chemistry from University of Illinois at Urbana-Champaign (1990). He was an NSF Postdoctoral Fellow at Harvard University (1990-92). He started his independent career as an assistant professor in 1992 at Arizona State University, moved to University of Michigan at Ann Arbor as Robert W. Parry Professor of Chemistry in 1999, and then UCLA in 2006 as Christopher S. Foote Professor of Chemistry and Irving and Jean Stone Chair Professor in Physical Sciences. Since 2012 he has been the James and Neeltje Tretter Chair Professor of Chemistry at University of California, Berkeley, and a Senior Faculty Scientist at Lawrence Berkeley National Laboratory. He is the Founding Director of the Berkeley Global Science Institute, and the Co-Director of the Kavli Energy NanoSciences Institute, and the California Research Alliance by BASF.



Reticular Chemistry and Materials for Water Harvesting from Air Anytime Anywhere

Water is essential to life. It is estimated that by 2050 nearly half of the world population will live in water stressed regions, due to either arid conditions or lack of access to clean water. This presentation outlines the parameters of this vexing societal problem and presents a solution to the global water challenge. Reticular Chemistry, a new branch of science has led to metal-organic frameworks (MOFs), which have emerged as a unique class of porous materials capable of trapping water at relative humidity levels as low as 10%, and doing so with facile uptake and release kinetics. From laboratory testing to field trials in the driest deserts, kilogram quantities of MOFs have been tested in several generations of devices. We show that the vision of having clean water from air anywhere in the world at any time of the year is potentially realizable with MOFs and so is the idea of giving “water independence” to the citizens of the world.

Reception to Follow: due to COVID precautions, an outdoor reception is scheduled on the Biodesign C Patio

ZOOM option will be available: <https://asu.zoom.us/j/87081218152>