

The Chemist's Interactions

Seminars @ the Chemistry Department



Friday, 16th June 2023

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Harvesting Water from Desert Air

There is nearly as much water in the atmosphere, at any one time, as in lakes and rivers on our planet. Almost one-third of the world population lives in water stressed regions and/or suffer from lack of clean water. The U.N. projects that by 2050 more than half of the world population will experience water stress for much of the year. We advance a solution based on MOF crystals molecularly programmed to capture water from the atmosphere especially in arid regions at low humidity (down to 10% R.H.), thereby providing ultra-pure water with no energy input aside from ambient sunlight. Laboratory and desert trials in Arizona, Mojave, and Death Valley deserts) reveal that practical and energy efficient water production is feasible, and that the vision of distributed, personalized, off-grid, and mobile water systems is within our reach. Furthermore, results showing that the MOF water harvesters work anywhere in the world at any time of the year will be presented. This makes our goal, to provide each person on our planet with water independence, a reasonable one.



The event will be streamed on zoom.us
for external participants!

For registrations: marco.ortenzi@unimi.it



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