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Zeolites as nanosensors

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I will describe how zeolites can be used as sensors for biological molecules.With pore sizes in the range 0.3-1.4 nm, zeolites can sensitive for awide range of biological molecules.I will describe a database ofcomputationally predicted zeolite-like materials [1].These crystals were discovered by a Monte Carlo search for zeolite-like materials. I will describe the virtual screening procedure used to identify the compounds. I will also describe how the database of materials may be screened for zeolite sensors for specific biological molecules.

Biography

Michael Deem completed his Ph.D. at age of 24 from UC Berkeley, having received his B.S. from Caltech. He is the John W. Cox Professor at Rice University, where he does research in the areas of evolution, immunology, and materials. He has published >100 articles, given >230 invited talks, and is an inventor on 14 US patents. He is an editor of "PEDS" and Physical Biology. Deem received a number of awards, including the NSF CAREER Award, Alfred P. Sloan Fellowship, Camille Dreyfus Teacher-Scholar Award, Allan P. Colburn Award, Professional Progress Award of the AIChE, and O'Donnell Award of TAMEST.

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