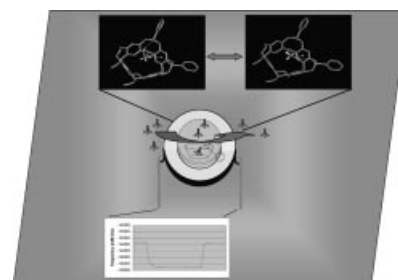


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COVER PICTURE

The cover picture shows the operating principle of a supra-molecular mass sensor. The cavitand receptor is coated on the surface of a quartz crystal microbalance (QCM) and exposed to a flux of the analyte (methanol) in the gas phase (center). All complexation events occurring at the gas/solid interface are collectively recorded by the transducer as a frequency drop (bottom). The molecular interactions responsible for the selective alcohol detection are evidenced in the crystal structure of the complex (top). The Microreview by R. Pinalli, M. Suman and E. Dalcanele covers the issues involved in turning a synthetic receptor into an effective supra-molecular gas sensor, namely design and preparation of the receptor as function of the analytes to be detected, evaluation of the complexation properties of the receptor in the solid state and in the gas phase, sensor reversibility and selectivity as function of layer permeability, on p. 451 ff.



MICROREVIEWS

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451 R. Pinalli, M. Suman, E. Dalcanele*

Cavitands at Work: From Molecular Recognition to Supramolecular Sensors

Keywords: Alcohols / Cavitands / Molecular recognition / Sensors

