Chemical sensors [fundamentals of sensing materials.

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Monografía

Nanomaterials and nanotechnology are new fields of science and technology. Fundamentally, nanotechnology is about manipulating and making materials at the atomic and molecular levels. It is expected that nanotechnology will change solid-state gas sensing dramatically and will probably gain importance in all fields of sensor application over the next 10 to 20 years. Nanotechnology is still in its infancy, but the field has been a hot area of research globally since a few years ago. It has been found that with reduction in size, novel electrical, mechanical, chemical, catalytic, and optical properties can be introduced. As a result, it has been concluded that one-dimensional structures will be of benefit for developing new-generation chemical sensors that can achieve high performance. Therefore, in the last decade, the study of 1-D materials has become a primary focus in the field of chemical sensor design. Synthesis of new nano objects and exploitation of their extraordinary properties is the goal and dream of many researchers engaged in the field of sensor design. In addition, it has also been established that 1-D structures may be ideal systems in which to study the nature of chemical sensing effects

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