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## Porous Ceramic Fibers: Materials and Applications

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Extensive research efforts are directed toward the development of highly sensitive gas sensors using novel nanostructured materials. Among the different strategies for producing sensor devices based on nanosized building blocks, polymeric fiber templating approach which is combined by chemical and physical synthesis routes was attracted much attention. This unique morphology increases the surface area and reduces the interfacial area between film and substrate. Consequently, the surface activity is markedly enhanced while deleterious interfacial effects between film and substrate are significantly reduced. Both effects are highly advantageous for gas sensing applications. In this presentation, facile synthesis of hollow and porous metal oxide nanostructures and their applications in chemical sensors will be discussed.

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