

Chapter 11

Summary

This overview summarized the present status of the research of porous materials with directionally elongated pores. In comparison with the conventional porous and foamed materials with isotropically almost spherical pores, the lotus materials exhibit peculiar features derived from alignment of long pores such as anisotropy of various properties. Besides, these materials possess lightweight and integrated mechanical properties. Thus, these materials should be considered as one of the advanced engineering materials from the point of view of not only materials science but also applications for the practical use. In this review, the author mentioned only a few kinds of applications, but there are a variety of possible prospective applications such as air bearings, filters, mechanical parts of airplanes, and automobiles. We hope the further research and development of this kind of materials will surely be expanded to widen a path to porous materials science and technology.