

Fabrication of porous polymeric materials “Monoliths”



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| Keywords | Polymer monolith, Porous materials |
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| Technical Support Skills | |
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Research Contents Fabrication of epoxy-based polymer monoliths and their applications

What is monolith ?

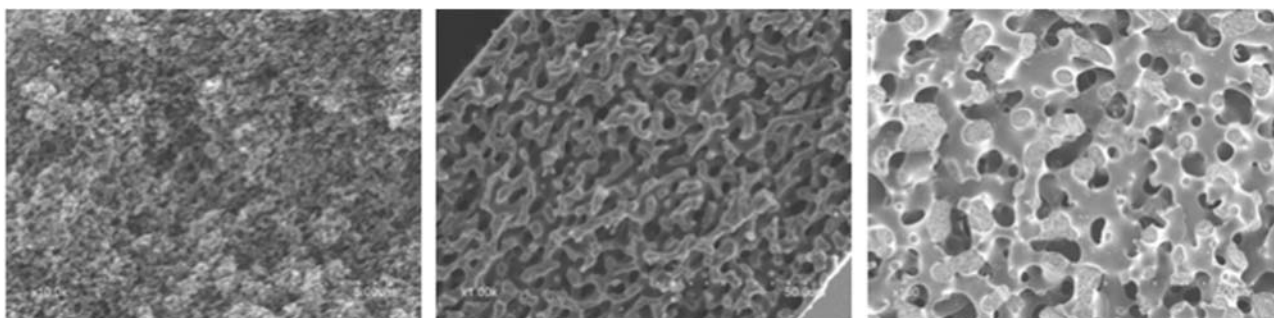
Monolith is a three-dimensional porous material having bicontinuous structure. It has attracted much attention as a novel porous material due to its large permeability, and has enormous potential in applications for separation and adsorption media.

Well-controlled bicontinuous structure of monolith

Epoxy-based polymer monoliths are prepared by phase separation during polymerization of epoxy resin in porogenic solvent. Polymerization temperature and/or amount of porogenic solvent adjust structure of monolith, such as pore size and porosity.

Functionalization of monolith

Surface of epoxy-based polymer monoliths is chemically modified by several functional groups, and therefore, the monoliths have additional function as needed, such as hydrophilic or hydrophobic surface, and selective adsorptivity.



Available Facilities and Equipment

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