

## Structuring of Polymer-basis Electrodes for Supercapacitors

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Here we report versatile ways of structuring 3D nanoporous electrodes based on polymeric materials for high-performance supercapacitors. Polymers that can create porous architecture include the polymers of intrinsic microporosity (PIMs), fluorinated polyimides, conducting polymers with catechol derivative which is electrosynthesized and redox-active. Nanopores formed in electrodes are well organized, providing transport path for electrolyte ions and 3D network structure of electrode materials enables considerable electronic property. Specifically, the electrodes in this study show large capacitance, excellent rate capability, and good cycle retention over at least 10000 charging/discharging cycles, which we ascribe to well-tailored 3D nanoarchitecture of electrodes.