

Editorial

Polymer-Derived Ceramics (PDCs)

Zengyong Chu^{*,§}

State Key Lab of Advanced Ceramic Fibers and Composites, College of Aerospace and Materials Engineering, National University of Defense Technology, Changsha 410073, P.R. China

Polymer-derived ceramics (PDCs) are the ceramics derived from preceramic polymers by a pyrolysis process, which makes them much different from those by traditional sintering techniques. The PDCs present a growing interest in

the ceramic science for their much suitability in (i) elaborating complex forms (fibers, films, porous ceramics, etc...), (ii) developing ceramic micro/nanostructures, (iii) controlling ultimate compositions and (iv) producing amorphous ceramics stable at ultra-high temperatures. The most attractive point of the PDCs lies in the tailoring the complex microstructure and functional properties easily with the aid of molecular design and polymer synthesis. To some extent, their life energy is rooted in the polymers.

In this special issue, papers were organized from a viewpoint of the effect of polymer structures on the functional properties of the PDCs.

*Address correspondence to this author at the State Key Lab of Advanced Ceramic Fibers and Composites, College of Aerospace and Materials Engineering, National University of Defense Technology, Changsha 410073, P.R. China; Tel/Fax: +86-731-84574250; E-mail: chuzy@nudt.edu.cn

§Guest Editor

© Zengyong Chu; Licensee Bentham Open.

This is an open access article licensed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/3.0/>) which permits unrestricted, non-commercial use, distribution and reproduction in any medium, provided the work is properly cited.