הטכניון - מכון טכנולוגי לישראל

TECHNION - ISRAEL INSTITUTE OF TECHNOLOGY

הפקולטה להנדסה כימית
ע״ש וולפסון
The Wolfson Department of Chemical Engineering

Wolfson Department of Chemical Engineering Seminar
Lecture Hall 6, Wolfson Department of Chemical Engineering,
Wednesday, February 26th, 2020 at 13:30

Preparation and Morphology of Porous Poly (aryl ether ketone) Materials

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The fabrication of polymeric materials with ordered submicron-size void structures is potentially valuable for array of separation technologies. Template-directed preparation of macro-porous polymers with ordered array of pores is attractive for the preparation of materials with ordered micron size pores. Template-directed preparation of meso and nano-porous materials had been explored less extensively. A novel process for the fabrication of porous poly (ether ether ketone), PEEK, materials with nanometer size pores was developed by PoroGen Corporation (currently division of Air Liquide). The preparation methodology and the development of a controlled nano-porous morphology in the semi-crystalline PEEK will be reviewed. Porous PEEK materials are formed by melt processing. Extrusion, injection molding or compression molding is used to form porous materials of controlled shape, morphology and pore structure. The semi-crystalline structure of the nano-porous PEEK provides for an exceptional solvent and chemical resistance and superior thermo-mechanical properties. These are enabling attributes for a broad range of gas and liquid separations.

Refreshments will be served at 13:15