



Crystalline and organized porous solids

Foreword

Since the 1950s, crystalline porous solids characterized by a narrow pore size distribution have been extensively studied by numerous scientists. These exciting solids, among which zeolites are the most known materials, have major applications in industry as ion exchangers in detergents, as drying agents (for gases and liquids), as adsorbents and molecular sieves (e.g., separation of normal and *iso*-alkanes, separation of xylenes) and as catalysts (acid–base or redox catalysis). In the last decade, the discovery of ordered mesoporous materials increased the maximum pore size by an order of magnitude and more recently the synthesis of crystalline porous metal–organic framework as hybrid materials with promising properties has widened the scope even further.

This thematic issue of *Comptes rendus Chimie*, entitled *Crystalline and organized porous solids*, follows the first EURESCO conference which took place in France in 2002 on the same topic. Its aim is to give an overview on the research performed on this type of solids by leading teams in Europe (39 contributions), but also by a few ones from outside Europe. Review articles on their own results and full papers on recent

research performed by these groups on the synthesis, characterization and properties of these porous solids are reported. This special issue is also an opportunity to thank Professor Jean-Louis Guth and Dr Henri Kessler from the Mulhouse University (France) for their pioneering work in the synthesis of crystalline porous solids (zeolites and related materials (aluminophosphates, gallophosphates...)) from fluoride-containing mixtures.

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