



## Preface

This special issue of Catalysis Today has been edited on the occasion of the 4th Czech-Italian-Spanish (CIS-4) workshop on Molecular Sieves and Catalysis that took place in Liblice Castle, Czech Republic, June 15–18, 2011. The workshop is organized every two years since 2005, where it started as a Czech-Italian meeting in San Camigliatello, Spain being officially incorporated in the workshop during the CIS-3 in Acireale, Sicily, 2009. This periodic workshop has been in some way inspired by the bilateral Czech-Italian meetings on catalysis that took place in seventies, eighties and early nineties of the last century.

Some of the contributions presented at the workshop have been selected for this special issue after profound review process. The volume opens with an introductory contribution, the aim of which is to offer the readers some material to re-evaluate the perspectives and challenges of zeolite-based materials for advanced catalytic applications. The following contributions, taken altogether, touch on many of the “hot” topics related to the use of zeolite and molecular sieves in general for catalysis. It can be found, among them, new synthesis routes for materials that are actually used at industrial scale, with the aim of conferring them new properties that would eventually improved their catalytic performance; the use of microporous materials for non oil-dependent chemical process; exploration of some metal-organic frameworks (MOFs) for catalysis and adsorption; strategies for improving the accessibility of reactants to the active sites, by decreasing their diffusion path through the zeolite crystals and last but not least, immobilization of homogeneous organometallic complexes on the surface of mesoporous materials or silsesquioxanes.

We are convinced that zeolite-type materials will still play in the future a key role in the development of new catalytic processes for the production of chemicals and in the energy field, but these

are big challenges. Every contribution counts for that goal, every new approach has to be properly evaluated, and every effort and help in keeping the scientific community active in this field should be greatly acknowledged. We would like to express our gratitude to the authors for their timely contributions, as well as to the referees for their thoughtful evaluation of papers. We wish to thank also Prof. Miguel Banares (Editor-in-Chief) for his help in preparing this special issue.

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