

SHORT CV

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Professor Fernando Rey (1963) received the degree in chemistry at the Universidad Autónoma de Madrid (1986). Their Ph.D. studies were performed at the Instituto de Tecnología Química during 1988 – 1992 under supervision of Prof. Vicente Fornés. The area of research of his Ph. D. Thesis was synthesis, characterization and catalytic applications of hydrotalcites.

Subsequently, he joined the group of Prof. John M. Thomas from 1993 to 1995 at the Royal Institution of Great Britain as Post Doctoral fellow. During his Post doctoral stay, his research was focussed on the development of new ‘in-situ’ characterisation tools based on the employ of synchrotron radiation for the understanding behaviour of micro- and mesoporous catalysts.

He returned to the Instituto de Tecnología Química in 1995 and one year later he obtained a permanent position at that Institute. Recently, in 2007, he has been promoted to Research Professor of CSIC.

The current area of research is focussed in the synthesis and deep characterization of micro and mesoporous materials with application in catalysis, adsorption and nanotechnology. He is co-author of more than 90 papers in high impact Scientific Journals and numerous presentations in congresses, and currently his ‘h-index’ is 34. Also, he has been listed in more than 30 patents related to the synthesis of new porous materials and their application in different industrial processes. Many of these patents have been transferred to industries.

LIST OF RELEVANT PUBLICATIONS

1. *A large-cavity zeolite with wide pore windows and potential as an oil refining catalyst.* A. Corma, M.J. Díaz-Cabañas, J. Martínez-Triguero, F. Rey y J. Rius; Nature 418 (2002) 514.
2. *A zeolite with interconnected 8-, 10- and 12-ring pores and its unique catalytic selectivity.* A. Corma, F. Rey, S. Valencia, J.L. Jordá y J. Rius; Nature Mater. 2 (2003) 493.

3. *Supramolecular Self-assembled Molecules as Structure Directing Agents for the Synthesis of Zeolites*; A. Corma, F. Rey, J. Rius, M.J. Sabater, S. Valencia; *Nature* 431 (2004) 287.
4. *Using the “Memory Effect” of Hydrotalcites for Improving the Catalytic Reduction of Nitrates in Water*. A.E. Palomares, J.G. Prato, F. Rey y A. Corma; *J. Catal.* 221 (204) 62.
5. *The Synthesis and Structure of the Bidimensional Zeolite ITQ-32 with Small and Large Pores*; Cantin, A. Corma, S. Leiva, F. Rey, J. Rius, S. Valencia; *J. Am. Chem. Soc.* 127 (2005) 1156.
6. *P-Derived Organic Cations as Structure-Directing Agents: Synthesis of a High-Silica Zeolite (ITQ-27) with a Two-Dimensional 12-Ring Channel System*; D. L. Dorset, G. J. Kennedy, K. G. Strohmaier, M. J. Díaz-Cabanas, F. Rey, A. Corma; *J. Am. Chem. Soc.* 128 (2006) 8862.
7. *Synthesis and characterization of the all-silica pure polymorph C, and the enriched polymorph B intergrowth material of Beta zeolite*; A. Cantín, A. Corma, M. J. Díaz-Cabañas, J. L. Jordá, M. Moliner, F. Rey; *Angew. Chem.; Inter. Ed.* 45 (2006) 8013.
8. *Pure silica ITQ-32 zeolite allows separation of linear olefins from paraffins*. M. Palomino, A. Cantín, A. Corma, S. Leiva, F. Rey, S. Valencia; *Chem. Commun.* (2007) 1233.
9. *A zeolitic structure (ITQ-34) with connected 9- and 10-ring channels obtained with phosphonium cations as structure directing agents*. A. Corma, M. J. Diaz-Cabanas, J. L. Jorda, F. Rey, G. Sastre, K. G. Strohmaier; *J. Am. Chem. Soc.* 130 (2008) 16482.
10. *Metal–Organic Nanoporous Structures with Anisotropic Photoluminescence and Magnetic Properties and Their Use as Sensors*. B. V. Harbuzaru, A. Corma, F. Rey, P. Atienzar, J. L. Jorda, H. García, D. Ananias, L. D. Carlos, J. Rocha; *Angew. Chem. Int. Ed.* 47 (2008) 1080.