

Jean Pierre BELLAT

Professor (54 years)



Institution: University Bourgogne Franche-Comté,
Laboratoire Interdisciplinaire Carnot de Bourgogne (ICB UMR CNRS 6303)
9 A. Savary BP 47870 21078 Dijon Cedex France
Phone : (33) 380395929 E-mail : jean-pierre.bellat@u-bourgogne.fr

Qualifications:

1985 Ph-D of physical-chemistry – University of Burgundy
1995 Accreditation to supervise research (HDR)

Careers path:

1985-1987 Scientific volunteer in national service to Algeria
1987-1988 Post-Doc researcher at IFP (Separation of xylenes by selective adsorption on zeolites)
1988 - 1999 Assistant Professor (Faculty of Science and Techniques / University of Burgundy)
Since 1999 Professor (Faculty of Science and Techniques/University Bourgogne Franche-Comté)

Research activities:

Physico-chemical study of adsorption, reactivity and diffusion mechanisms of single or mixed gases or liquids (paraffins, aromatics, halogenated solvents, water, sulfur compounds, nitrogen and carbon oxides...) on nanoporous solids (zeolites, mesoporous silicas, clay minerals...). Basic and applied research at the macroscopic level (Thermodynamics and Kinetics) as well as at the molecular level (X-Ray diffraction, Infrared spectroscopy, Molecular dynamics...).

Examples of studies in progress:

- Adsorption and diffusion of oxygen, water and carbon dioxide in cork
- Hydrolysis of lithium hydride
- Adsorption properties and stability of MOFs
- Separation of hydrogen isotopes by selective adsorption on zeolites
- Intrusion of water in heterogeneous hydrophobic confined spaces
- Capture of formaldehyde by adsorption

Number of publications: 82 articles referenced in Web of Science

5 recent publications:

- A. Lagorce-Tachon, T. Karbowiak, C. Loupiac, A. Gaudry, F. Ott, C. Alba-Simionesco, R.D. Gougeon, V. Alcantara, D. Mannes, A. Kaestner, E. Lehman and J.P. Bellat, The cork viewed from the inside, **J. Food Engineering** **149** (2015) 214-221 (DOI:10.1016/J.Jfoodeng.2014.10.023)
- M. Salazar, G. Weber, J.M. Simon, I. Bezverkhyy, J.P. Bellat, Characterization of adsorbed water in MIL-53(Al) by FTIR spectroscopy and ab-initio calculations **Journal of Chemical Physics** **142**(12) (2015) 124702-11 (DOI: 10.1063/1.4914903)
- F.X. Coudert, A.U. Ortiz, V. Haigis, D. Bousquet, A.H. Fuchs, A. Ballandras, G. Weber, I. Bezverkhyy, N. Geoffroy, J.P. Bellat, G. Ortiz, G. Chaplais, J. Patarin And A. Boutin, Water adsorption in flexible gallium-based MIL-53 metal organic framework, **J. Phys. Chem. C** **118** (2014) 5397-5405 (DOI: 10.1021/jp412433a)
- T. Karbowiak, G. Weber And J.P. Bellat, Confinement of Water in Hydrophobic Nanopores: Effect of the Geometry on the Energy of Intrusion, **Langmuir** **30** (2014) 213-219 (DOI: 10.1021/la4043183)
- J. Quiroz Torres, S. Royer, J.-P. Bellat, J.-M. Giraudon And J.-F. Lamonier, Formaldehyde: catalytic oxidation as a promising soft way of elimination, **Chem. Sus. Chem.** **6**(4) (2013) 578-92 (DOI: 10.1002/cssc.201200809)

Responsibilities:

- Since 1997, director of the team "Adsorption on Porous Solids" (ASP)
- Member of the board of the International Adsorption Society