

## Preface



In 2000, on his 60th birthday, Jean-Claude Lavalley retired as head of the Laboratoire Catalyse and Spectrochimie in Caen. He was made “Directeur de Recherches Emerite” in the CNRS, and started a new career, being a visiting professor and advisor at various universities, and attending to his family life.

Jean-Claude Lavalley was born in Gratot, Normandy, on 7 January 1940, and began his academic career in Caen in 1958, where he graduated as a Chemical Engineer in 1962. While preparing his Ph.D. in the laboratory for Molecular Spectroscopy with Prof. Romanet, Jean-Claude Lavalley spent some time for his military period on the chemistry of tritiated species, and is among the few to have recorded spectra of tritiated compounds. After getting his doctorate in 1969 on NMR and IR spectroscopy of deuterated compounds, Jean-Claude Lavalley spent some time in Norman Sheppard’s laboratory in Norwich where he got involved in the IR spectroscopic study of the adsorbed

species. This was a milestone in his scientific life: back in Caen, he was given the responsibility of the laboratory (he became Directeur de Recherche CNRS in 1979), which he oriented from molecular spectroscopy to the infrared study of heterogeneous catalysts by probe molecule adsorption. He established himself as an expert in the domain by his work on basicity, acid–base pairs, redox systems and by developing new probe molecules (such as MeOH, SO<sub>2</sub>, . . .) or by extending the scope of infrared in catalysis. Very rapidly, he realised that the properties of the working catalyst in reaction conditions can widely differ from those of a catalyst in a vacuum cell, at low temperature, and he turned to the use a special reactor-cell for time resolved spectroscopy with online analysis of products by GC or MS to obtain information on catalytic sites and on the reaction mechanisms, his main interests were in Claus and deNO<sub>x</sub> catalysis, sulphation, methanol synthesis, catalysis by acidic zeolites, hydrotreating catalysts and ozone adsorption and decomposition. For 25 years, his work in this domain was the source of more than 300 publications, and he was the second most cited French Chemist in heterogeneous catalysis according to ISI in 1997.

Jean-Claude Lavalley was an active member of the national committee of the French Chemical Society and participated in several scientific councils. He was a member of the International Advisory Boards of Phys. Chem. Chem. Phys. (formerly J. Chem.Soc. Faraday Trans.), Appl. Catal. B and J. Chim. Phys.

One of the main aspects of Jean-Claude Lavalley’s personality is his scientific rigour and his demand for true evidence. He never agreed to publish a paper not containing some truly new information, and has always opposed the splitting of results in several articles. He encouraged his students to dig as deep as possible in their spectroscopic data, but always stopped them before they overcame the strict scientific meaning of

the spectra. Owing to the team (of friends more than colleagues) that Jean-Claude Lavalley built around him from the beginning, he was able to keep to his high scientific standards while contributing much to all the aspects of infrared spectroscopy in heterogeneous catalysis. This special issue of *Catalysis Today* aims at showing this diversity and innovation, and the appreciation expressed by Jean-Claude Lavalley's friends for his scientific contribution.

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