

Prof. Marque holds a professorship position at the Aix-Marseille University since 2008. He is a former post-doctoral fellow of Prof. Barton (TAMU, USA) and of Prof. Fischer (Zurich University Switzerland). He authored and co-authored more than 130 articles, 15 reviews (e.g. Chem. Soc. Rev., Chem. Rev., and Russ. Chem. Rev.), and 6 patents. His researches are focus on Physical Organic Chemistry of Radical Species applied to radical chemistry, spin labeling, polymers, materials, drug discovery, and environment chemistry.

Prof. Marque has been awarded of several academic and industrial grants in France and has been awarded by The Russian Science Foundation of a grant for foreigner researchers.

Since 2015, Prof. Marque is team leader in Aix-Marseille University at Institut de Chimie Radicalaire and in N.N. Voronjtsov Novosibirsk Institute of Organic Chemistry in Novosibirsk.

### **“Spin-labeling for Overhauser enhanced MRI and for labeled polymers”**

The talk of today is devoted to the spin labeling of biomolecules and polymers, and how Serendipity played its role there. In the first part of the talk, the design and the development of the first radical probe suitable for investigating the non-radical enzymatic activity in vitro and in vivo using Electron Paramagnetic Resonance and Overhauser enhanced MRI, respectively, is described.

In the second part of the talk, the selective and quantitative spin labeling of polymer chains using Nitroxide Mediated Polymerization using trityl radical as spin-label is described and how this result has been applied for the unexpected preparation of Stable Organic Radical Polymers by radical processes.