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Evgueni Kirillov obtained his MSc from the N. I. Lobachevsky State University of Nizhny Novgorod, Russian Federation (1996) and PhD (2000) at the G.A. Razuvaev Institute of Organometallic Chemistry of the Russian Academy of Sciences. After several appointments as a Research Fellow at the University of Rennes 1 (UR1, France) with Jean-François Carpentier and FAU Erlangen-Nürnberg (Germany) with John Gladysz, he completed Habilitation (2008) and then joined the UR1, Institute of Chemistry of Rennes (2009) where he holds a position of Associate Professor. His research focuses on the following areas: organometallic and coordination chemistry of oxophilic elements, polymerization catalysis, understanding of mechanisms and prediction of chemical reactivity using quantum mechanics methods, catalytic activation of CO₂. He is consultant of Total Petrochemicals company and has > 100 articles in peer-reviewed journals and patents, and two book chapters.

Lecture Title: Advanced ligands in early-transition metal chemistry for polymerization catalysis and C-H/O bond activation reactions

Abstract: This contribution will present a survey of several projects running in our group in the following areas: (a) engineering new catalytic systems and developing new polymerization processes for production of industry relevant materials with tailored physicochemical and thermo-mechanical properties; (b) design of ligand platforms (hybride, oscillating, bimetallic) for new polymerization systems and possible applications (e.g. activation of C-H/O bonds, CO₂); (c) understanding the structure –activity relationships using modern analytical methods and QM computations.

