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Preface

This volume contains key papers given at the World Polymer Congress “Macro 2004”, held in Paris on July 4–9, 2004, under the auspices of the International Union of Pure and Applied Chemistry (IUPAC). The volume covers the session devoted to Polymer Chemistry Reactions and Processes, in particular topics: 1) Polycondensation, Polyaddition, Chain Polymerization, Catalytic Polymerization, Functionalization; 2) Preparation of Polymers in Dispersed and Unconventional Media.

The contributions in the first topic dealt with either purely mechanistic or synthetic aspects of metallocene and enzyme catalysis, as well as anionic, cationic and radical initiated polymerizations and cover quite different types of monomers ranging from olefins and dienes, to heterocycles including saccharidic monomers, with the common aim of understanding the elementary reaction mechanisms and better controlling the polymerization processes.

Due to the versatility of polymerization processes in dispersed media (topic 2), a large variety of polymers exhibiting a wide range of functionalities, properties, morphologies and particle size, can be now prepared. A considerable number of such materials are indeed involved in many diverse applications and intensive research is increasingly devoted to their synthesis and properties. The selected papers cover the following aspects: recent developments in emulsion polymerization; smart polymer colloids; unconventional preparation methods of dispersed polymers; organic/inorganic hybrid colloids.

The papers presented in this special volume aim at providing a nonexhaustive illustration of this symposium session.

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