

Professor Robert G (Bob) Gilbert is Professor at both the University of Queensland and at Yangzhou University, China, spending half of each year in each institution. He received his undergraduate training at Sydney University, his PhD from the Australian National University and postdoctoral work at MIT. He then returned to the University of Sydney, where he was Director of the Key Centre for Polymer Colloids. In 2006, he moved to the University of Queensland to pursue his interests in the relations between human health and the structures of complex glucose polymers (starch and glycogen). He is a Fellow of the Australian Academy of Science (an Academician, equivalent to a Fellow of the NAS in the US), author of about 550 papers, 6 patents, and 2 books (on unimolecular reactions and on emulsion polymerization), with 24,000 citations and an h-index of 80. In reaction dynamics, he developed models and methods for predicting and fitting gas-phase rate coefficients of unimolecular and recombination reactions. In emulsion polymerization (the commonest means of making a wide variety of industrial polymers such as paints and adhesives), he developed a full understanding of the fundamental mechanisms; his discoveries are used worldwide by industry. Over the last 20 years, he has extended this knowledge of *synthetic* polymers to the understanding and characterizing of branched *natural* polymers, particularly starch and glycogen. The target is biosynthesis-structure-property relations important for human health (especially control and prevention of obesity and diabetes) and industrial uses. He was President of the International Union of Pure and Applied Chemistry (IUPAC) Macromolecular Division (1998-2001) and Chair of both the Polymer and Physical Chemistry Divisions of the Royal Australian Chemical Institute. He is a winner of a Sydney University Excellence in Teaching Award, of the Smith Medal of the RACI in 1992 in recognition of outstanding research achievements in chemistry over the past decade, the Institute's Polymer Medal in 1995, the Australian Institute of Nuclear Science and Engineering Medal in 1993 for his work in understanding polymerization mechanisms, the RACI Olle Prize in 1996 for his book on emulsion polymerization, the RACI Physical Chemistry Medal in 1998, the RACI Applied Research Medal in 2005, the RACI Leighton Memorial Medal in 2007, the *Ronald Ottewill Award* of the UK Polymer Colloids Forum 2007, the Australian Academy of Science Craig Prize (2010), the Paul J Flory Award in Polymer Characterization, Int. Conference on Polymer Characterization, 2017, the Jiangsu Province Science and Technology Cooperation Award, 2019, the Jiangsu Province Friendship Award (2021) for international relations and the Yangzhou University Teaching Award (Postgraduate) (2022). His membership of editorial boards has included *Food Hydrocolloids*, *Carbohydrate Polymers*, *Biomacromolecules*, *Journal of Polymer Science* and *Polymer*. He has chaired many conferences, including the IUPAC World Chemistry Congress and General Assembly (Brisbane, 2001) and IUPAC World Polymer Congress (Gold Coast, 1998). He is fluent in English (native speaker), French and German, and speaks basic Mandarin.