

August 22-27, 2027 | ICC JEJU, Jeju Island, Korea

Professor Keith C. Gordon

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New Zealand

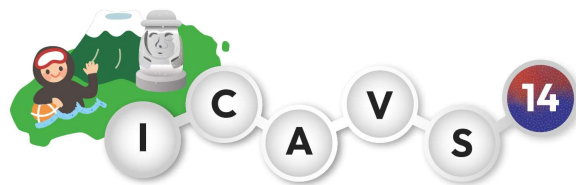


Professor Keith C. Gordon is a physical chemist at the University of Otago, New Zealand, whose research uses vibrational and electronic spectroscopy, computational chemistry and chemometrics to understand the structure, dynamics and function of complex molecular and solid-state materials. His work has ranged from the photophysics of transition-metal complexes and molecular electronic materials to pharmaceutical solids, biological and food materials, and, more recently, materials for energy conversion and storage. A continuing theme is the development and application of Raman spectroscopy, particularly resonance Raman, Raman microscopy and low-frequency Raman spectroscopy, alongside time-resolved infrared and related spectroscopic methods.

Keith received his BSc(Hons) and PhD in Chemistry from Queen's University Belfast in 1986 and 1989, respectively. His doctoral research with Professor John J. McGarvey focused on laser spectroscopy of solar-energy-related compounds. He subsequently held a Director's Postdoctoral Fellowship at Los Alamos National Laboratory, working with Professor W. H. Woodruff on ultrafast laser spectroscopy of biological systems and solar-energy materials. He joined the Department of Chemistry at the University of Otago in 1993 and was appointed Professor in 2009. He served as Head of the Department from 2018 to 2023.

His current research includes low-frequency Raman spectroscopy of pharmaceutical and functional materials, excited-state spectroscopy and photophysics, spectroscopic studies of molecular and polymeric materials for solar-energy conversion and photocatalysis, and the coupling of vibrational spectroscopy with multivariate analysis and machine learning. He has also developed extensive interdisciplinary applications of spectroscopy in pharmaceutical science, food and marine products, cultural-heritage materials and biological systems. His research is strongly collaborative, with long-standing international partnerships across Europe, Asia, Australia and North America.

Keith has published more than 440 peer-reviewed papers and has supervised or co-supervised a large number of postgraduate researchers. He is a Fellow of the Royal Society Te Apārangi, the Royal Society of Chemistry and the New Zealand Institute of Chemistry. His honours include the New Zealand Institute of Chemistry Maurice Wilkins Prize (2010), the Royal Society Te Apārangi MacDiarmid Medal (2019) and the



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University of Otago Distinguished Research Medal (2021). He has delivered invited and keynote lectures at major international meetings in Raman spectroscopy, advanced vibrational spectroscopy, photochemistry and materials science, including ICAVS and ICORS. He is a founding Principal Investigator in both the MacDiarmid Institute for Advanced Materials and Nanotechnology and the Dodd-Walls Centre for Photonic and Quantum Technologies.