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## Editorial

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### Cather Simpson

Department of Physics & School of Chemical Sciences,  
The University of Auckland,  
Auckland, 1142, New Zealand

and

The Photon Factory,  
The University of Auckland,  
Auckland, 1142, New Zealand

and

The MacDiarmid Institute for Advanced Materials  
and Nanotechnology,  
New Zealand

and

The Dodd-Walls Centre for Photonic  
and Quantum Technologies,  
New Zealand  
Email: [c.simpson@auckland.ac.nz](mailto:c.simpson@auckland.ac.nz)

**Biographical notes:** M. Cather Simpson joined the University of Auckland in 2007, with a joint appointment in Physics and Chemical Sciences. She received her PhD in the USA in Medical Sciences with a focus on the ultrafast vibrational dynamics of heme proteins. After a Department of Energy Distinguished Postdoctoral Fellowship, she joined the Chemistry Department at Case Western Reserve University as an Assistant Professor to pursue research in ultrafast energy conversion in molecules. After earning tenure and promotion at CWRU, she moved to the University of Auckland, where her research includes fast photochemistry of molecules in the condensed phase using the tools of pulsed laser spectroscopy. She is particularly interested in how molecules ‘decide’ what to do with the energy they absorb as light as they convert it into more useful forms of energy, such as mechanical motion or a charge separated state. She also explores the fundamental interaction of light with materials in laser machining and microfabrication applications. She is Director of the Photon Factory, founding scientist of Engender Technologies, and co-founding scientist of Orbis Diagnostics. Recent awards include a NZ National Teaching Excellence Award and the 2016 Silicon Valley Forum first-place medal for Agtech. She was named the Baldwins Researcher Entrepreneur and the BNZ Supreme Award winner at the 2016 KiwiNet commercialisation awards.

The *7th International Conference on Advanced Materials and Nanotechnology (AMN-7)*, convened in Nelson, New Zealand in 2015. The conference was the seventh in the biennial series of meetings sponsored by the MacDiarmid Institute for Advanced Materials and Nanotechnologies, and the quality of the scientific programme illustrated the continued strength of these fields in New Zealand and internationally. Exciting recent advances at biological interfaces, engineered nanosystems, molecular materials and nanoscale structures were highlighted with excellent plenary lectures and invited and contributed talks. The edited volume presented here illustrates the depth and breadth of the research that was the hallmark of our conference. Professor Shane Telfer, of the Institute of Fundamental Sciences at Massey University, put together a terrific conference as the head of the AMN-7 organising team. The contributions presented here have been peer-reviewed in a selective process. We trust that you will find this edited volume illuminating.