Dedication

These proceedings are dedicated to the memory of Xudong Weng, who died tragically in a traffic accident this January while attending a conference at the International Center for Theoretical Physics in Trieste, Italy.

Xudong worked with me on the theory of near edge structure in electron energy loss spectroscopy while completing the requirements for his PhD at Arizona State University. He was a student who demonstrated exceptional ability in research. On his own initiative, he pioneered the use of the pseudo-atomic-orbital method for calculating unoccupied densities of states and hence near edge structure. This work brought the accuracy of pseudopotential methods to inner shell fine structure theory for semiconductors and light element compounds. His calculations showed remarkable agreement with experiment, and we were able to explain features in the spectra taken by Phil Batson at resolution of 0.3 eV.

After finishing his PhD project, Xudong worked with Prof. Sankey on the use of pseudopotential methods in molecular dynamics simulations and surface structure calculations. He was offered a position in the prestigious solid state theory group in the Cavendish Laboratory in Cambridge to continue working in this area. The conference in Trieste was the first meeting he attended while working at Cambridge.

Xudong was not only a gifted researcher, he was also willing to help other researchers on their projects not necessarily related to his own. All who have had the pleasure of working with him will not only miss his potential contributions to science, but also the humour and sense of fun he brought to any group.

Peter REZ

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