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Introduction

The papers in this issue are dedicated to the memory of Theo Thole. They are written by friends and close colleagues. Most of the papers were presented at the Memorial Conference held in Groningen on 11 and 12 October 1996.

Personal accounts of Theo's work and life are given in the contributions by Gerrit van der Laan, Wim Nieuwpoort, Jan Kommandeur, Piet van Duijnen and Massimo Altarelli. An introduction to all papers published by Theo is included. Additionally Gerrit van der Laan gives an introduction to the 45 papers he and Theo wrote together.

The scientific contributions to this issue all deal with topics greatly influenced by the work of Theo. Alex de Vries and coworkers discuss Theo's work on polarizabilities. The multiplet model is discussed in the contributions by Akio Kotani and Haruhito Ogasawara, Takeo Jo, Kozo Okada and Akio Kotani, and Francois Jollet and coworkers. Christian Brouder and Gunnar Brinkmann give a detailed account of the graphical methods, which play such a crucial role in Theo's work. The applications of the crystal field multiplet model to the interpretation of X-ray absorption and magnetic circular dichroism spectra are discussed by Pieter Kuiper and coworkers, Jan van Elp and Barry Searle and Eric Pellegrin and coworkers.

Paolo Carra reviews the sum rules, while the related topics of the fluorescence yield sum rules and the branching ratios of the $L_{2,3}$ edges of the rare earths are discussed by Jeroen Goedkoop and Michel van Veenendaal, work done in collaboration with Theo. Philippe Sainctavit focuses on the properties of the magnetic operators and Michael Krisch and coworkers discuss resonant Raman scattering. Further applications of X-ray absorption and MCD are given by Stefania Pizzini and coworkers and Steve Cramer and coworkers, who also discuss the use of resonant X-ray emission. Finally, photoemission applications are discussed by M. Atanasov and D. Reinen and by D. Knabben and coworkers.

Altogether the contributions in this issue honour the important work of Theo Thole. It is hoped that the fundamental concepts as developed by Theo will stimulate a large amount of research for years to come.

Frank de Groot

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