

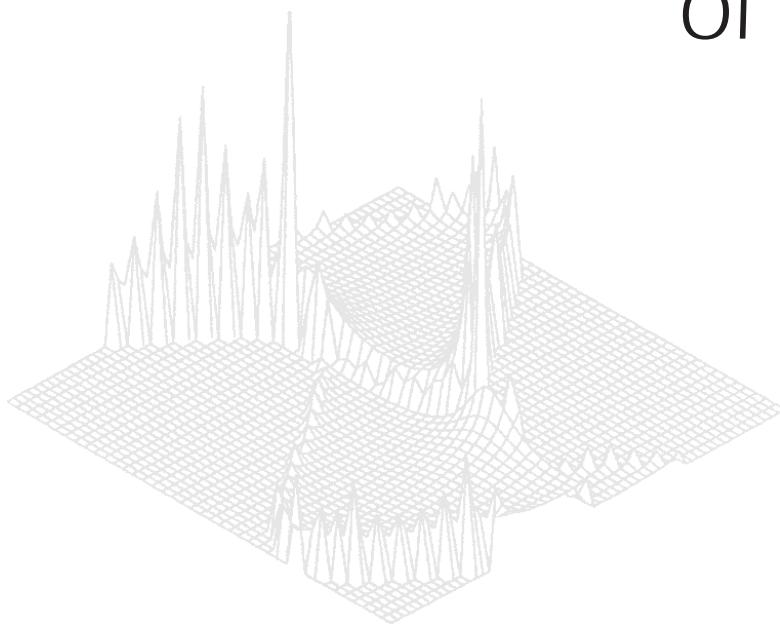
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## Foreword



**Professor Erich Weigold**

The workshop on 'Past Achievements and Future Directions in Electron Momentum Spectroscopy Studies on Atoms, Molecules and Solids' was held at the Flinders University of South Australia on 10 November 1997. It was organised to mark the contributions of Professor Erich Weigold to (e, 2e) spectroscopy on atomic, molecular and solid-state targets. It also coincided (roughly!) with the celebration of his 60th birthday. Speakers at the meeting included former students, postdoctoral fellows and collaborators, both from Australian and overseas laboratories. Their topics, the substance of which are reproduced in this special issue, reflect the diversity of Erich Weigold's influence on many areas of atomic, molecular and solid-state physics during the course of his career.

Erich Weigold was born in Haifa, Palestine, on 19 October 1937. With the outbreak of World War II the Weigold family was interned, and in 1941 shipped

to camps in Australia. After the conclusion of the war these ‘prisoners’ were given permission to become immigrants, and so in September 1946 the Weigold family was able to settle in the Barossa Valley in South Australia. In 1955 he entered the University of Adelaide to begin his undergraduate studies and in 1958 he graduated from the Physics Department with a first class Honours degree. Pursuing his then interest in nuclear physics he travelled to the Australian National University (ANU) and in 1962 he was awarded his doctorate for ‘An Experimental Study of Direct and Compound Nuclear Processes in Neutron and Deuteron Induced Reactions’.

Following the pioneering days at the ANU, in November 1962 Erich Weigold returned to the University of Adelaide to take up his first academic post as a Lecturer in Physics. This sojourn in Adelaide was brief, however, as an opportunity arose to travel to Washington DC and take up a position (1964–70) in the Air Force Office of Scientific Research. On his return, from August 1970 until October 1992, first as a Senior Lecturer (1970–73), then as a Reader (1974–78) and finally as a Professor (1979–92), Erich Weigold led a group in the Department of Physics at Flinders University that established an international reputation for experimental (e, 2e) studies on atomic, molecular and condensed matter targets. Finally, in late 1992 another challenge presented itself and Erich Weigold left Flinders to take up his present appointment as Director of the Research School of Physical Sciences and Engineering at the ANU in Canberra. It is indicative of his drive that he has not only succeeded in this task, but has also maintained a strong collaboration with colleagues at Flinders and set up a new laboratory at the ANU. The research highlights from this period (1970–97) are many and varied with only some of them being reflected in the pages of this issue.

One of the goals of the workshop was to bring together Australian and overseas scientists who have had a close professional relationship with Erich Weigold over his distinguished career. More than sixty people attended the one-day gathering to hear lectures from ten invited speakers. Additional participants, whom the organisers could not accommodate with an oral presentation, have also contributed to this volume.

The meeting was sponsored by the *Australian Journal of Physics*, the Australian Institute of Physics, the Australian Academy of Science and the Faculty of Science and Engineering at Flinders University. The organising committee consisted of S. J. Buckman, R. T. Cahill, P. J. Storer, P. J. O. Teubner and myself.

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March 1998  
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