



Technical Report
DL-TR-96-004

Bibliography of Publications using the Daresbury "Miyake" Monochromator

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October 1996

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ISSN 1362-0207

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Bibliography of Publications Using the Daresbury "Miyake" Monochromator.

Introduction

Presented here is a list of publications produced using results from the plane-grating, grazing-incidence monochromator designed at Daresbury in 1974.

The "Miyake" scheme¹ is order sorting by differential reflection of photon energies and an early instrument based on this scheme was designed for the Daresbury SRF on the NINA synchrotron and used for gas-phase spectroscopy². The present Miyake monochromator is a refinement of this earlier instrument and was designed for solid state photoemission in the 40-200 eV energy range³.

The monochromator was ordered (from Bird and Tole Ltd.) in 1974 and has been used on three synchrotron radiation sources⁴. It is still in use today, 21 years later, on SRS station 6.1 at Daresbury. To celebrate this fact and to stimulate discussion of VUV spectroscopy for surface science past, present and future, the "Miyake 21, Surface Spectroscopy in the VUV" study weekend was held at Daresbury Laboratory on 21-22 April 1995.

This list of publications includes all the identifiable papers containing results from experiments taking light from the Miyake monochromator up to the Miyake 21 meeting. A less visible but nevertheless important contribution the monochromator has made is to the theses of dozens of PhD. students who have taken data on these experiments.

The search

The search for Miyake publications was approached in several ways:

For work on Nina 1975-1977:

Physics Abstracts was used to identify papers with authors including R.H. Williams, D.P. Woodruff, C. Norris, I.T. McGovern, D. Norman and G.P. Williams. Papers up until 1981 were examined to catch any that were not published until long after the work was done.

For work on Tantalus, Wisconsin, 1978-9:

Physics Abstracts was again used for the authors D.P. Woodruff, D. Norman, I.T. McGovern, G.P. Williams, G.J. Lapeyre, C.G. Olson, T.N. Rhodin. Papers up until 1984 were examined.

BIDS (Bath Information and Data Services) was also used from 1981 (the start of BIDS' records).

For work on the SRS, Daresbury:

BIDS was used for the Principal Investigators who have had beamtime on station 6.1 using information supplied by SRS User Liaison Office.

General

BIDS was also used to search for citations of the paper describing the monochromator⁴. David Norman supplied many Miyake references from his own work.

Every effort has been made to find all publications resulting from work on the Daresbury Miyake monochromator but inevitably some will have inadvertently been missed. The author wishes to express his regrets to the authors of those papers and would urge them to send their details so they can be added to the bibliography.

The bibliography will be continued for as long as publications are being produced as a result of work on station 6.1 and current users of that station are requested to send reprints of their work so that a collection of papers can be maintained.

Acknowledgements

The author would like to acknowledge David Norman for suggesting the publication of this literature search as a Daresbury Laboratory Report and for helping to identify Miyake publications produced from work at Wisconsin.

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