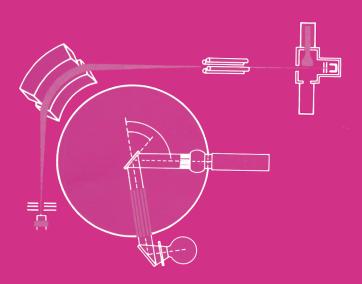


Journal of Analytical Atomic Spectrometry

Including Atomic Spectrometry Updates (ASU)



Vol.3 No.7 October 1988

ASU Inorganic Massiral And Ara

Journal of Analytical Atomic Spectrometry

(Including Atomic Spectrometry Updates) JAAS Editorial Board*

Chairman: L. C. Ebdon (Plymouth, UK)

M. S. Cresser (Aberdeen, UK)

J. Egan (London, UK)

D. A. Hickman (London, UK)

J. M. Mermet (Villeurbanne, France)

D. L. Miles (Wallingford, UK)

B. L. Sharp (Aberdeen, UK)

M. Thompson (London, UK) A. M. Ure (Aberdeen, UK)

*The JAAS Editorial Board reports to the Analytical Editorial Board, Chairman J. D. R. Thomas (Cardiff, UK)

JAAS Advisory Board

F. C. Adams (Antwerp, Belgium) R. M. Barnes (Amherst, MA, USA)

L. Bezùr (Budapest, Hungary)

R. F. Browner (Atlanta, GA, USA)

S. Caroli (Rome, Italy)

A. J. Curtius (Rio de Janeiro, Brazil)

L. de Galan (Vlaardingen, The Netherlands)

J. B. Dawson (*Leeds, UK*)

K. Dittrich (Leipzig, GDR)

W. Frech (Umeå, Sweden)

K. Fuwa (*Tokyo, Japan*)

A. L. Gray (Guildford, UK)

S. Greenfield (Loughborough, UK)

G. M. Hieftje (Bloomington, IN, USA)

G. Horlick (Edmonton, Canada)

B. V. L'vov (Leningrad, USSR)

Ni Zhe-ming (Beijing, China)

N. Omenetto (Ispra, Italy)

E. Piško (Bratislava, Czechoslovakia)

T. C. Rains (Gaithersburg, MD, USA)

E. Meintjies (Pretoria, South Africa)

R. G. Michel (Storrs, CT, USA)

P. Norman (Middlesbrough, UK)

Ni Zhe-ming (Beijing, China)

M. H. Ramsey (London, UK)

*J. M. Rooke (Leeds, UK)

G. Rossi (Ispra, Italy)

J. M. Mermet (Villeurbanne, France)

E. Piško (Bratislava, Czechoslovakia) P. R. Poole (Hamilton, New Zealand)

I. Rubeška (Prague, Czechoslovakia)

A. Sanz-Medel (Oviedo, Spain)

R. Stephens (Halifax, Canada)

J. Štupar (*Ljubljana, Yugoslavia*)

R. E. Sturgeon (Ottawa, Canada)

J. F. Tyson (Loughborough, UK)

G. C. Turk (Gaithersburg, MD, USA)

*B. L. Sharp (Aberdeen, UK)

A. Taylor (Guildford, UK)

*A. M. Ure (Aberdeen, UK)

B. Welz (Überlingen, FRG)

J. Williams (Guildford, UK)

J. B. Willis (Victoria, Australia)

R. E. Sturgeon (Ottawa, Canada)

R. Van Grieken (Antwerp, Belgium)

A. Walsh, K. B. (Victoria, Australia)

B. Welz (Überlingen, FRG)

T. S. West (Aberdeen, UK)

Atomic Spectrometry Updates Editorial Board

Chairman: *D. L. Miles (Wallingford, UK) H. Matusiewicz (Poznan, Poland)

R. M. Barnes (Amherst, MA, USA)

N. W. Barnett (Plymouth, UK)

*A. A. Brown (Cambridge, UK)

F. Buckley (Leeds, UK) C. Burridge (Aberdeen, UK)

R. Bye (Oslo, Norway)

*M. S. Cresser (Aberdeen, UK)

J. B. Dawson (Leeds, UK)

J. R. Dean (Huddersfield, UK)

*L. C. Ebdon (Plymouth, UK) *J. Egan (London, UK)

A. T. Ellis (High Wycombe, UK)

J. Fazakas (Bucharest, Rumania)

D. J. Halls (Glasgow, UK)

S. J. Haswell (London, UK)

*D. A. Hickman (London, UK)

S. J. Hill (Plymouth, UK)

H. Hughes (Anglesey, UK)

K. W. Jackson (Albany, NY, USA) P. N. Keliher (Villanova, PA, USA)

K. Kitagawa (Nagoya, Japan)

*D. Littlejohn (Glasgow, UK) F. J. M. J. Maessen (Amsterdam, The Nether-

*J. Marshall (Middlesbrough, UK)

*Members of the ASU Executive Committee

Editor, JAAS: Judith Egan Assistant Editor: Harpal S. Minhas The Royal Society of Chemistry, Burlington House, Piccadilly, London W1V 0BN, UK.

Telephone 01-734 9864.

Telex No. 268001. Fax 01-734 2306

US Associate Editor, JAAS:

Dr. J. M. Harnly

US Department of Agriculture,

Beltsville Human Nutrition Research

Center, BLDG 161, BARC-EAST,

Beltsville, MD 20705, USA.

Telephone 301-344-2569

Advertisements: Advertisement Department, The Royal Society of Chemistry, Burlington House, Piccadilly, London W1V 0BN. Telephone 01-437 8656. Telex No. 268001

Journal of Analytical Atomic Spectrometry (JAAS) (ISSN 0267-9477) is published eight times a year by The Royal Society of Chemistry, Burlington House, London W1V 0BN, UK. All orders accompanied with payment should be sent directly to The Royal Society of Chemistry, The Distribution Centre, Blackhorse Road, Letchworth, Herts. SG6 1HN, UK. 1988 Annual subscription rate UK £209.00, Rest of World £240.00, USA \$395.00. Air freight and mailing in the USA by Publications Expediting Inc., 200 Meacham Avenue, Elmont, NY 11003. USA Postmaster: send address changes to Journal of Analytical Atomic Spectrometry (JAAS), Publications Expediting Inc., 200 Meacham Avenue, Elmont, NY 11003. Second class postage paid at Jamaica, NY 11431. All other despatches outside the UK by Bulk Airmail within Europe, Accelerated Surface Post outside Europe. PRINTED IN THE UK

© The Royal Society of Chemistry, 1988. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form, or by any means, electronic, mechanical, photographic, recording, or otherwise, without the prior permission of the publishers.

Information for Authors

Full details of how to submit material for publication in JAAS are given in the Instructions to Authors in Issue 1. Separate copies are available on request.

The Journal of Analytical Atomic Spectrometry (JAAS) is an international journal for the publication of original research papers, short papers, communications and letters concerned with the development and analytical application of atomic spectrometric techniques. The journal is published eight times a year, includes com-prehensive reviews of specific topics of interest to practising atomic spectroscopists and incorporates the literature reviews which were previously published in Annual Reports on Analytical Atomic Spectroscopy (ARAAS).

Manuscripts intended for publication must describe original work related to atomic spectrometric analysis. Papers on all aspects of the subject will be accepted, including fundamental studies, novel instrument developments and practical analytical applications. As well as AAS, AES and AFS, papers will be welcomed on atomic mass spectrometry and X-ray fluorescence/emission spectrometry. Papers describing the measurement of molecular species where these relate to the characterisation of sources normally used for the production of atoms, or are concerned, for example, with indirect methods of analysis, will also be acceptable for publication. Papers describing the development and applications of hybrid techniques (e.g., GC-coupled AAS and HPLC - ICP) will be particularly welcome. Manuscripts on other subjects of direct interest to atomic spectroscopists, including sample preparation and dissolution and analyte preconcentration procedures, as well as the statistical interpretation and use of atomic spectrometric data will also be acceptable for publication. There is no page charge.

The following types of papers will be con-

Full papers, describing original work.

Short papers: the criteria for originality are the same as for full papers, but short papers generally report less extensive investigations or are of limited breadth of subject matter.

Communications, which must be on an urgent matter and be of obvious scientific importance. Communications receive priority and are usually published within 2-3 months of receipt. They are intended for brief descriptions of work that has progressed to a stage at which it is likely to be valuable to workers faced with similar problems.

Reviews, which must be a critical evaluation of the existing state of knowledge on a particular facet of analytical atomic spectrometry.

Every paper (except Communications) will be submitted to at least two referees, by whose advice the Editorial Board of JAAS will be guided as to its acceptance or rejection. Papers that are accepted must not be published elsewhere except by permission. Submission of a manuscript will be regarded as an undertaking that the same material is not being considered for publication by another journal.

Manuscripts (three copies typed in double spacing) should be addressed to:

Judith Egan, Editor, *JAAS* The Royal Society of Chemistry, Burlington House, Piccadilly, London W1V 0BN, UK

Dr. J. M. Harnly US Associate Éditor, JAAS US Department of Agriculture, Beltsville Human Nutrition Research Center, BLDG 161, BARC-EAST, Beltsville, MD 20705, USA

All queries relating to the presentation and submission of papers, and any correspondence regarding accepted papers and proofs, should be directed to the Editor or US Editor (addresses as above). Members of the JAAS Editorial Board (who may be contacted directly or via the Editorial Office) would welcome comments, suggestions and advice on general policy matters concerning JAAS.

Fifty reprints are supplied free of charge.