

SCIENCO
**SOUTHERN BRAZILIAN JOURNAL
OF CHEMISTRY**

ISSN 0104-5431

AN INTERNATIONAL FORUM FOR THE RAPID PUBLICATION
OF ORIGINAL SCIENTIFIC ARTICLES DEALING WITH CHEMISTRY AND
RELATED INTERDISCIPLINARY AREAS

VOLUME SIX, NUMBER SIX

JULY 1998

EDITOR

LAVINEL G. IONESCU, Departamento de Química, CCNE, Universidade Luterana do Brasil, Canoas, RS & Instituto de Química, Pontifícia Universidade Católica do Rio Grande do Sul, Porto Alegre, RS, BRASIL

EDITORIAL BOARD

- D. BALASUBRAMANIAN, Centre for Cellular and Molecular Biology, Hyderabad, INDIA
NÉCTOR E. BERTORELLO, Departamento de Química Orgánica, Facultad de Ciencias Químicas, Universidad Nacional de Córdoba, Córdoba, ARGENTINA
AÉCIO P. CHAGAS, Instituto de Química, UNICAMP, Campinas, SP, BRASIL
JUAN JOSÉ COSA, Departamento de Química y Física, Facultad de Ciencias Exactas, Universidad Nacional de Río Cuarto, Río Cuarto, ARGENTINA
GLENN A. CROSBY, Department of Chemistry, Washington State University, Pullman, WA, USA
VITTORIO DEGIORGIO, Dipartimento di Elettronica, Sezione di Fisica Applicata, Università di Pavia, Pavia, ITALIA
JOSÉ C. TEIXEIRA DIAS, Departamento de Química, Universidade de Coimbra, Coimbra, PORTUGAL
XORGE A. DOMÍNGUEZ, Departamento de Química, Instituto Tecnológico y de Estudios Superiores de Monterrey, Monterrey, N.L., MÉXICO
OMAR A. EL SEUD, Instituto de Química, Universidade de São Paulo, São Paulo, SP, BRASIL
ERNESTO GIESBRECHT, Instituto de Química, Universidade de São Paulo, São Paulo, SP, BRASIL
FERNANDO GALEMBECK, Instituto de Química, UNICAMP, Campinas, SP, BRASIL
NISSIM GARTI, Casali Institute of Applied Science, Hebrew University of Jerusalem, Jerusalem, ISRAEL
GASPAR GONZÁLEZ, Centro de Pesquisa, CENPES-PETROBRAS, Ilha do Fundão, Rio de Janeiro, RJ, BRASIL
YOSHITAKA GUSHIKEM, Instituto de Química, UNICAMP, Campinas, SP, BRASIL
WILLIAM RASE, Department of Chemistry, Wayne State University, Detroit, MI, USA
I. B. IVANOV, Laboratory of Thermodynamics and Physico-chemical Hydrodynamics, Faculty of Chemistry, University of Sofia, Sofia, BULGARIA
IVAN IZQUIERDO, Departamento de Bioquímica, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, BRASIL
V.A. KAMINSKY, Karpov Institute of Physical Chemistry, Moscow, RUSSIA
MICHAEL LAING, Department of Chemistry, University of Natal, Durban, SOUTH AFRICA
EDUARDO LISSI, Departamento de Química, Universidad de Santiago de Chile, Santiago, CHILE
WALTER LWOWSKI, Department of Chemistry, New Mexico State University, Las Cruces, N.M., USA
G. MANOHAR, Bhabha Atomic Research Centre, Chemistry Division, Bombay, INDIA
AYRTON FIGUEIREDO MARTINS, Departamento de Química, Universidade Federal de Santa Maria, Santa Maria, RS, BRASIL
FRED MENCER, Department of Chemistry, Emory University, Atlanta, GA, USA
MICHAEL J. MINCH, Department of Chemistry, University of the Pacific, Stockton, CA, USA
K. L. MITTAL, IBM Corporate Technical Institutes, Thornwood, N.Y., USA
ARNO MÜLLER, Escola de Engenharia, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, BRASIL
JOSE MIGUEL PABERA, Instituto de Investigaciones en Catalisis y Petroquímica, Universidad Nacional del Litoral, Santa Fe, ARGENTINA
LARRY ROMSTED, Department of Chemistry, Rutgers University, Piscataway N.J., USA
GILBERTO FERNANDES DE SÁ, Departamento de Química Fundamental, Universidade Federal de Pernambuco, Recife, PE, BRASIL
DIMITRIOS SAMIOS, Instituto de Química, Universidade Federal do Rio Grande do Sul, Porto Alegre, RS, BRASIL
DIOGENES DOS SANTOS, Department of Molecular Biology, Oxford University, Oxford, ENGLAND
JOSEPH A. SCHUPLE, Department of Chemistry, New Mexico Highlands University, Las Vegas, N.M., USA
BEN K. SELINGER, Department of Chemistry, Australian National University, Canberra, AUSTRALIA
KOZO SHINODA, Department of Applied Chemistry, Faculty of Engineering, Yokohama National University, Yokohama, JAPAN
CRISTOFOR I. SIMIONESCU, Academia Română, Filiala Iasi, Iasi, ROMANIA
UMBERTO TONELLATO, Dipartimento di Chimica Organica, Università degli Studi di Padova, Padova, ITALIA
DIETER VOLLMER, Max Planck Institut für Kolloid und Grenzflächenforschung, Berlin, GERMANY
RAOUL ZANA, Institut Charles Sadron, CRM-EAHP, Strasbourg, FRANCE

SOUTHERN BRAZILIAN JOURNAL OF CHEMISTRY

ISSN 0104-5431

VOLUME SIX, NUMBER SIX JULY 1998

CONTENTS / CONTEÚDO

A TRIBUTE TO PROFESSOR LAVINEL G. IONESCU ON HIS 55th BIRTHDAY UMA HOMENAGEM AO PROF. DR. LAVINEL G. IONESCU NO SEU 55º ANIVERSÁRIO A.D. Martinez and B. J. Kid	1
EVALUATION OF AIR QUALITY IN A REGION OF COAL PROCESSING AND SIDERURGIC ACTIVITIES IN THE STATE OF RIO GRANDE DO SUL, BRAZIL Elba Calesso Teixeira, Josete Dani Sanchez and Daniela Montanari Migliavacca	11
COMPARATIVE STUDY OF THE CHEMILUMINESCENCE PRODUCED BY THE ACTIVATED POLYMORPHONUCLEAR LEUKOCYTES IN PHYSIO- LOGICAL AND VARIOUS PATHOLOGICAL CONDITIONS R. M. Olinescu, Maria Greabu, D. Crocna, E.A. Kummerow, Valy Constantinescu and Fraga Paveliu	25
COMPARATIVE STUDY OF BIOSORPTION OF METALLIC CATIONS BY DIFFERENT BACTERIA T. Gavriloaiei, Raluca Mocanu, Maria Calistru and R. Olariu	33
EXTRACTION OF COLORED SUBSTANCES FROM MATÉ (ILEX PARAGUARIENSIS) Vania Regina Gabbi Polli, Alnei Ramos Prochnow and Juliane Zimmerman Tamaninini	45
NEW COMPLEXES OF Pr(III), Sm(III), Gd(III), Ho(III), La(III) 1-(2'-BENZTHIAZOLYL)-3-METHYL-4-AZO-(4"-NITRO- PHENYL)-PYRAZOLYN-5-ONE Anca Emandi, Mariana Balasoii and Tudor Rosu	53
SnO ₂ - BASED INERT ANODES FOR ALUMINIUM ELECTROLYSIS. THE INFLUENCE OF CeO ₂ ADDITION ON THE ELECTRICAL RESISTIVITY Rodica Galasiu, Ioan Galasiu, Nicolae Popa and Vasilica Chivu	63
EFFECTIVENESS OF CERTAIN STABILIZERS ON THE AGEING OF POLYETHYLENE FILMS S. Jipa, R. Setnescu, T. Setnescu, C. Podina and I. Mihalcea	71
IMMOBILIZATION OF ALCOHOL OXIDASE IN SiO ₂ MATRIX PREPARED BY SOL-GEL METHOD Lia Stanciu, Melania-Liliana Arsene and Constanta Parlog	77
AUTHOR INDEX	87