Mines Branch Information Circular IC 210

BIBLIOGRAPHY OF HIGH-TEMPERATURE CONDENSED STATES RESEARCH PUBLISHED IN CANADA, JULY-SEPTEMBER, 1968

by

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SYNOPSIS

This report contains bibliographic information concerning research work on high-temperature condensed states published in Canadian journals from July 1 to September 30, 1968.

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BIBLIOGRAPHIE DES RECHERCHES EFFECTUÉES DANS LE DOMAINE DES ÉTATS CONDENSÉS AUX TEMPÉRATURES ÉLEVÉES, AU CANADA, DE JUILLET À SEPTEMBRE, 1968

par

Norman F.H. Bright*

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RÉSUMÉ

Le présent rapport contient des renseignements bibliographiques sur les recherches effectuées sur les états condensés aux températures élevées, publiées dans les revues scientifiques canadiennes au cours de la période de juillet 1 à septembre 30, 1968.

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INTRODUCTION

This report is a further contribution to the series of bibliographic bulletins of information on high-temperature condensed states research that have been published as Mines Branch Information Circulars since March 1960 on behalf of the Commission on High Temperatures and Refractories of the International Union of Pure and Applied Chemistry. The present document covers the three-month period from July 1 to September 30, 1968, and gives details of work published in Canadian scientific and technical journals during that period.

Anyone not now receiving these reports who wishes to do so, anyone who would like to receive the analogous documents relating to research on the gaseous state and on plasma phenomena, or anyone who currently receives either of these bibliographies but to whom they are no longer of interest, is requested to advise the compiler accordingly so that the appropriate changes may be made in the relevant mailing lists.

The compiler would very much appreciate being advised of any work published in Canadian journals, and lying within the scope of these bibliographies, that has escaped his notice in order that such work may be mentioned in a subsequent issue of this series of Information Circulars.

Any further information concerning these bibliographies or any of the other relevant IUPAC activities can be obtained from the compiler of this report at the following address:

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Anyone interested to receive the High-Temperature Gaseous State Bibliographies that are prepared on a quarterly basis by Professor Leo Brewer of the University of California should notify the compiler of the present document and arrangements will be made to have these Gaseous State Bibliographies sent gratis to such people.

BIBLIOGRAPHY OF WORK ON HIGH-TEMPERATURE

CONDENSED STATES PUBLISHED IN CANADA,

JULY-SEPTEMBER, 1968

International Union of Pure and Applied Chemistry
Commission on High Temperatures and Refractories

Bibliography (April 1 to September 30, 1968)
for Canada

collected by Dr. Norman F.H. Bright, Mines Branch, Ottawa

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A. Devices for achieving temperatures above 1500°C

Nil

B. Devices for measuring and controlling temperatures above 1500°C

Nil

C. Devices for physical measurements at temperatures above 1000°C

1. Probe Measures Oxygen in Molten Metal.
Anon.
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H. Kojima, S.G. Whiteway and C.R. Masson (Atlantic Regional Laboratory, National Research Council of Canada, Halifax, Nova Scotia).
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D. Properties, at temperatures below 1000°C, of materials that melt above 1500°C

a. Metallic materials

1. Improvement of Kryukov and Zhukhovitskii Method for Measurement of Diffusion. Application of Self-Diffusion in Alpha-Iron.
R. Angers and F. Claisse (Department of Mining and Metallurgy and Solid State Research Centre, Laval University, Quebec City, Quebec).
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2. On the Mechanical and Magnetic Hardening of Alnico 8.
G. Bégin and A. Dubé (Department of Mining and Metallurgy and Solid State Research Centre, Laval University, Quebec City, Quebec).
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K. G. McNeill, J. S. Hewitt and J. W. Jury (Department of Physics, University of Toronto, Toronto, Ontario).
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4. Magnetoresistances and the Phonon Conductivity of Metals.
W. van Witzenburg and M. J. Laubitz (Division of Applied Physics, National Research Council of Canada, Ottawa, Ontario).
Canad. Journ. Phys., 46 [17], 1887-1894 (1968).

b. Non-metallic materials

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Dov Bahat (Research and Development Laboratories, Corning Glass Works, Corning, New York, U.S.A.).
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L. Benguigui (Laboratoire de Physique du Solide, 98 rue Maurice Arnoux, Montrouge (Hauts-de-Seine), France).
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3. The Nature of Photolysis of Silver at an Oxide Semi-conductor Surface.
W. C. Clark and A. G. Vondjidis (Department of Physics, University of Bath, England).
Canad. Journ. Phys. 46 [16], 1776-1786 (1968).

4. The Origin of Pleochroism in Erythrite.
G. H. Faye and E. H. Nickel (Mineral Sciences Division, Mines Branch, Department of Energy, Mines and Resources, Ottawa, Ontario).
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5. Radiolysis in the Adsorbed State. II: N_2O Adsorbed on Silica Gel and Zirconia.
N. H. Sagert and R. W. Robinson (Chalk River Nuclear Laboratories, Chalk River, Ontario).
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6. The Grain-Size Dependence of the Electromechanical Properties in Lead Zirconate-Titanate Ceramics.
A.H. Webster and T.B. Weston (Mines Branch, Department of Energy, Mines and Resources, Ottawa, Ontario).
Canad. Ceram. Soc. Journ., 37, 33-38 (1968), incorporated in Canad. Clay and Ceramics, 41 [Jul.-Aug.], (1968).

7. Modified Chromatograph Determines Surface.
A.A. Winer (Mineral Processing Division, Mines Branch, Department of Energy, Mines and Resources, Ottawa, Ontario).
Canad. Controls and Instr., 7 [9], 42-44 (1968).

8. Extended Hückel Molecular Orbital Calculations on Some Titanium-Oxygen Systems.
Yu-ping Hsa (Department of Chemistry, Bridgeport University, Bridgeport, Connecticut, U.S.A.).
Canad. Journ. Chem., 46 [16], 2667-2674 (1968).

c. Mixed materials

Nil

E. Properties, at temperatures above 1000°C, of materials that melt above 1500°C

a. Metallic materials

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J. Kučera and T. Zemčík (Institute of Metallurgy, Czechoslovak Academy of Science, Brno, Czechoslovakia).
Canad. Met. Quart., 7 [2], 83-89 (1968).

2. Krebs's Model and Lindemann's Melting Law.
A.K. Singh and P.K. Sharma (Physics Department, Allahabad University, Allahabad, India).
Canad. Journ. Phys., 46 [15], 1677-1679 (1968).

b. Non-metallic materials

Nil

c. Mixed materials

Nil

F. Properties, at temperatures above 1000°C, of materials that melt below 1500°C

Nil

G. Phase Equilibria

1. Identification by X-Ray Diffraction of a Synthetic Solid Solution in the Iron-Oxygen System.
F. Abesque and C.E. Beaulieu (Department of Mining and Metallurgy and Solid State Research Centre, Laval University, Quebec City, Quebec).
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L.J.P. Cabri and J.C. Rucklidge (Mineral Sciences Division, Mines Branch, Department of Energy, Mines and Resources, Ottawa, Ontario).
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3. The Gold/Selenium System and Some Gold Seleno-Tellurides.
G.E. Cranton and R.D. Heyding (Department of Chemistry, Queen's University, Kingston, Ontario).
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K.G. Davis (Physical Metallurgy Division, Mines Branch, Department of Energy, Mines and Resources, Ottawa, Ontario).
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1. Kinetics of Hexagonal-Cubic Phase Transformation of Zinc Sulphide in Vacuo, in Zinc Vapour and in Sulphur Vapour.
Tamas Bansagi, E.A. Secco, O.K. Srivastava and Ronald R. Martin (Chemistry Department, St. Francis-Xavier University, Antigonish, Nova Scotia).
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2. Iron and Sulphur from Sulphidic Iron Ores.
W. Kunda, B. Rudyk and V.N. Mackiw (Sherritt-Gordon Mines Limited, Fort Saskatchewan, Alberta).
Canad. Min. Metall. Bull., 61 [675], 819-835 (1968).

3. On the Pseudo-Steady State Approximation for Gas-Solid Reactions.
Dan Luss (University of Houston, Houston, Texas, U.S.A.)
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4. Influence of Fluorides on the Formation of Mullite in Kaolin.
T.C. Shutt (Research Centre, Fiberglas Canada Limited, Sarnia, Ontario).
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