

Mines Branch Information Circular IC 238

BIBLIOGRAPHY OF HIGH-TEMPERATURE  
CONDENSED STATES RESEARCH PUBLISHED IN  
IN CANADA, OCTOBER-DECEMBER, 1969

by

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SYNOPSIS

This report contains bibliographic information concerning research work on high-temperature condensed states published in Canadian journals from October 1 to December 31, 1969.

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Direction des mines, Circulaire d'information IC 238

BIBLIOGRAPHIE DES RECHERCHES EFFECTUÉES  
DANS LE DOMAINE DES ÉTATS CONDENSÉS AUX  
TEMPÉRATURES ÉLEVÉES, AU CANADA,  
D'OCTOBRE À DÉCEMBRE, 1969

par

Norman F. H. Bright\*

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 d'octobre 1 à décembre 31, 1969.

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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 October 1 to December 31, 1969 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, or anyone who currently receives 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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The recipients of these bibliographies are reminded that they will no longer receive gratis copies of the quarterly bibliographies published on an international basis, for both condensed- and gaseous-states work, by the National Bureau of Standards, Washington, D. C. As detailed in earlier issues of this series of Information Circulars, those wishing to receive these international documents should purchase them from the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C., 20402, U. S. A. They should ask for NBS Special Publication 315.

The compiler of these reports also wishes to remind the recipients that, on request, the Superintendent of Documents will place their names on a special register, Notification Key N-380, to be notified of the price and availability of each issue of S. P. 315 as it is published.

The compiler also wishes to announce that he has been re-appointed as the Canadian representative on the I. U. P. A. C. Commission on High Temperatures and Refractories. His term of office had expired in 1969, but it has now been extended for a further term.

BIBLIOGRAPHY OF WORK ON HIGH-TEMPERATURE  
CONDENSED STATES PUBLISHED IN CANADA,  
OCTOBER-DECEMBER, 1969

International Union of Pure and Applied Chemistry  
Commission on High Temperatures and Refractories  
Bibliography (October 1 to December 31, 1969)  
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 1000°C

1. Consolidating Data from Many Temperature Points.  
E. L. Garelick (Transmation, Inc.).  
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Nil

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a. Metallic materials

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3. Strain Ageing under Stress in an Fe-0.01 wt % C Alloy.  
H. E. Rosinger and G. B. Craig (Department of Metallurgy and  
Materials Science, University of Toronto, Toronto, Ontario).  
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b. Non-metallic materials

1. Infrared Spectroscopic Investigations of Zeolites and Adsorbed  
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C.L. Angell and M.V. Howell (Union Carbide Research Institute,  
Tarrytown, New York, U.S.A.).  
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2. Adsorption of Gases on 4A Synthetic Zeolite.  
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Chemical Engineering, McMaster University, Hamilton, Ontario).  
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3. Energy Levels of Nd(IV) and Er(IV) in  $Y_2O_3$ .  
P. A. Narayana (Department of Physics, Indian Institute of  
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Canad. Journ. Phys., 47 [24], 2753-2761 (1969).

c. Mixed materials

Nil

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

Nil

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

Nil

### G. Phase Equilibria

1. Étude quantitative de l'énergie libre de  $\text{PbZrO}_3$  pur et dopé avec  $\text{Nb}_2\text{O}_5$ .  
L. Benguigui et H. Hervet (L'électronique appliquée, laboratoire du solide, Montrouge (Hauts-de-Seine), France).  
Canad. Journ. Phys., 47 [22], 2439-2443 (1969).
2. Cryoscopic Studies with Molten Fluorides. I: Depression of the Freezing Point of Calcium Fluoride by Alkaline-Earth Fluorides and Oxides and Calcium Silicates.  
H. Kojima and C. R. Masson (Atlantic Regional Laboratory, National Research Council of Canada, Halifax, Nova Scotia).  
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3. Calculation of the Diopside-Fluorite Eutectic Using Ionic Models. Comments on "The System  $\text{CaF}_2$ - $\text{CaMgSi}_2\text{O}_6$ ".  
Denis M. Shaw and Shirley M. Gibson (Department of Geology, McMaster University, Hamilton, Ontario).  
Canad. Journ. Earth Sci., 6 [6], 1458-1460 (1969).
4. The Constitution of Tin-Mercury Alloys at Lower Temperatures.  
R. W. Smith (Department of Physical Metallurgy and Science of Materials, University of Birmingham, England).  
Canad. Metall. Quart., 8 [2], 127-129 (1969).

### H. Reactions at temperatures above 1000°C

1. Current Efficiency Measurements in Laboratory Aluminum Cells.  
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A. H. Morrish, B. J. Evans, J. A. Eaton and L. K. Leung  
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R. J. Rutil and D. Barham (Department of Chemical Engineering and Applied Chemistry, University of Toronto, Toronto, Ontario).  
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5. Studies on Kinetics of Iron Oxide Reduction.  
P. K. Strangway, H. O. Lien and H. U. Ross (Department of Metallurgy and Materials Science, University of Toronto, Toronto, Ontario).  
Canad. Metall. Quart., 8 [2], 235-244 (1969).
6. The Solubility of Copper in Fayalite Slags at 1300°C.  
J. M. Toguri and N. H. Santander (Department of Metallurgy and Materials Science, University of Toronto, Toronto, Ontario).  
Canad. Metall. Quart., 8 [2], 167-171 (1969).

#### J. Review Article

1. Eldorado's Port Hope Refinery - 1969.  
R. M. Berry (Eldorado Nuclear Limited, Port Hope, Ontario).  
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