

Mines Branch Information Circular IC 142

BIBLIOGRAPHY OF HIGH-TEMPERATURE CONDENSED STATES  
RESEARCH IN CANADA, JULY-SEPTEMBER, 1962

by

Norman F. H. Bright\*

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SYNOPSIS

This report contains bibliographic information concerning research work on high-temperature condensed states published in Canadian journals during the period July, August and September, 1962.

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\*Head, Physical Chemistry Section, Mineral Sciences Division, Mines Branch, Department of Mines and Technical Surveys, Ottawa, Canada.

Direction des mines

Circulaire d'information IC 142

BIBLIOGRAPHIE DES RECHERCHES EFFECTUÉES AU CANADA  
DANS LE DOMAINE DES ÉTATS CONDENSÉS AUX TEMPÉRATURES  
ÉLEVÉES DE JUILLET À SEPTEMBRE, 1962

par

Norman F. H. Bright\*

RÉSUMÉ

Le présent rapport contient des données bibliographiques sur les recherches effectuées dans le domaine des états condensés aux températures élevées, dont les résultats ont été publiés dans les revues techniques du Canada au cours de la période comprise entre juillet et septembre 1962.

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\*Chef, Section de la chimie physique, Division des sciences minérales, Direction des mines, ministère des Mines et des Relevés techniques, Ottawa, Canada.

## INTRODUCTION

This report is a further contribution to the quarterly series of bibliographic bulletins of information on high-temperature condensed states research that have been published as Mines Branch Information Circulars at intervals since March, 1960, on behalf of the Sub-commission on Condensed States of the Commission on High Temperatures and Refractories of the International Union of Pure and Applied Chemistry.

This present document contains a bibliography of work in this field published in Canadian scientific and technical journals during the period July, August and September, 1962.

Any further information concerning these bibliographies can be obtained from the writer of this report at the following address:

Dr. Norman F.H. Bright,  
Mineral Sciences Division,  
Mines Branch,  
Department of Mines and Technical Surveys,  
555, Booth Street,  
Ottawa, 4, Ontario, Canada.

The writer is particularly anxious that anyone not currently receiving these reports, but who would wish to do so, should be added to the mailing list. Similarly, anyone currently on the mailing list to whom these reports are no longer of interest is requested to advise the writer accordingly, so that the name may be removed from the mailing list.

BIBLIOGRAPHY OF WORK ON HIGH-TEMPERATURE  
CONDENSED STATES PUBLISHED IN CANADA IN  
JULY -SEPTEMBER, 1962

International Union of Pure and Applied Chemistry  
Commission on High Temperatures and Refractories  
Sub-commission on Condensed States

Bibliography (July, August, September, 1962)

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

1. Two-wavelength pyrometer for temperature measurement in gas-solids systems.

N.J. Themelis and W.H. Gauvin.

Canad. Journ. Chem. Engg., 40 [4], 157-161 (1962).

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

nil

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

a. Metallic materials

1. Effects of oxygen and hydrogen on the flow and fracture characteristics of columbium and tantalum.

H.R. Ogden, A.G. Ingram and E.S. Bartlett.

Canadian Metallurgical Quarterly, 1 [1], 13-28 (1962).

2. Simulation of banding in steels.

J.S. Kirkcaldy, J. von Destinon-Forstmann and R.J. Brigham.

Canadian Metallurgical Quarterly, 1 [1], 59-81 (1962).

b. Non-metallic materials

1. On the possibility of intrinsic loss occurring at the edges of ferrites.

R.A. Hurd.

Canad. Journ. Phys., 40 [9], 1067-1076 (1962).

2. Magnesites.

L. Sanderson.

Canad. Mining Journ., 83 [7], 62-67 (1962).

3. Non-metallic thermal storage media.

V.D. Svikis.

Mines Branch Research Report R 96, Department of Mines and Technical Surveys, Ottawa. February 5, 1962.

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. The binary (anhydrous) systems  $\text{NaNO}_3\text{-LiNO}_3$ ,  $\text{LiClO}_3\text{-NaClO}_3$ ,  $\text{LiClO}_3\text{-LiNO}_3$ ,  $\text{NaClO}_3\text{-NaNO}_3$ , and the quaternary system  $\text{NaNO}_3\text{-LiNO}_3\text{-NaClO}_3\text{-LiClO}_3$ .

A.N. Campbell, E.M. Kartzmark and M.K. Nagarajan.

Canad. Journ. Chem., 40 [7], 1258-1265 (1962).

2. I: The binary system  $\text{Nb}_2\text{O}_5\text{-SiO}_2$ .

Mohammad Ibrahim and N.F.H. Bright.

- II: The binary system  $\text{CaO-Nb}_2\text{O}_5$ .

Mohammad Ibrahim, N.F.H. Bright and J.F. Rowland.

Mines Branch Research Report R 101, Department of Mines and Technical Surveys, Ottawa. July 27, 1962.

[Reprinted from Journ. Amer. Ceram. Soc.,

45 [5], 221-222 (1962)

and 45 [7], 329-334 (1962)] .

H. Reactions at temperatures above 1000°C

1. The high-temperature oxidation kinetics of zirconium.  
K.H. Akram and W.W. Smeltzer.  
Canadian Metallurgical Quarterly, 1 [1], 41-57 (1962).
2. Optimization study of chemical processes.  
M.T. Kuo and D.I. Rubin.  
Canad. Journ. Chem. Engg., 40 [4], 152-156 (1962).
3. High-temperature studies of metallurgical processes.  
Part II: The thermal reduction of calcined dolomite with  
silicon.  
J.M. Toguri and L.M. Pidgeon.  
Canad. Journ. Chem., 40 [9], 1769-1776 (1962).

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