

Mines Branch Information Circular IC 154

BIBLIOGRAPHY OF HIGH-TEMPERATURE
CONDENSED STATES RESEARCH IN
CANADA, APRIL-SEPTEMBER, 1963

by

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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 April to September, 1963.

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Direction des mines

Circulaire d'information IC 154

BIBLIOGRAPHIE DES RECHERCHES FAITES AU CANADA
SUR LES ÉTATS CONDENSÉS À HAUTES TEMPÉRATURES,
AVRIL-SEPTEMBRE, 1963

par

Norman F.H. Bright*

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RÉSUMÉ

Le présent rapport contient une bibliographie
des études faites sur les états condensés à haute
températures, et publiées dans les revues scientifiques
canadiennes au cours de la période comprise entre avril
et septembre, 1963.

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

Hitherto, these bulletins have been published at quarterly intervals; the present report, however, covers the six-month period April to September, inclusive, 1963. The reason for this change was that the author was attending I.U.P.A.C. meetings in London, England at the time when the last quarterly issue was due. The quarterly pattern will now be resumed.

Accompanying this report is the most recent issue of the similar international bibliography edited by Dr. J.J. Diamond of the National Bureau of Standards, Washington, D.C., based on information supplied by various contributors throughout the world, as listed on page i of that booklet.

During the course of the recent I.U.P.A.C. meetings in London, it was decided to continue the publication of these quarterly bibliographies and also the periodic lists of specialists working in the high-temperature condensed states field in various countries.

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

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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 any interest, is requested to advise the writer accordingly, so that the name may be removed from the mailing list.

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

BIBLIOGRAPHY OF WORK ON HIGH-TEMPERATURE
CONDENSED STATES PUBLISHED IN CANADA,
APRIL-SEPTEMBER, 1963

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

Bibliography (April to September, 1963)

for Canada

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

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

Nil

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

a. Metallic materials

1. Creep of Zircaloy-2 pressure tubes.

L.G. Bell.

Canad. Metall. Quart., 2 [2], 119-142 (1963).

2. Relationship between the real and ideal resistivity of platinum.

R.J. Berry.

Canad. Journ. Phys., 41 [6], 946-982 (1963).

3. A survey of niobium alloys and their strengthening mechanism.

D.C. Briggs.

Mines Branch Information Circular IC 153, July 1963,

Department of Mines and Technical Surveys, Ottawa, Canada.

4. Research in physical metallurgy.
J.S. Kirkaldy.
Canad. Mining Metall. Bull., 56 [612], 276-279 (1963).
5. The metallurgy of nickel-coated composite powders.
B. Meddings, J.A. Lund and V.N. Mackiw.
Canad. Mining Metall. Bull., 56 [615], 525-530 (1963).
6. Conference on refractory metals (Oslo).
J.G. Parr.
Canad. Metalworking, 26 [9], 44-46 (1963).
7. Determination of copper in high-purity niobium, tantalum, molybdenum and tungsten metals with bathocuproine.
Elsie M. Penner and W.R. Inman.
Mines Branch Research Report R111, June 1963,
Department of Mines and Technical Surveys, Ottawa, Canada.
8. Titanium in Canada.
Edward R. Rose.
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b. Non-metallic materials

1. Ceramic materials in the construction industry.
J.G. Brady.
Canad. Mining Metall. Bull., 56 [617], 728-736 (1963).
2. Surface properties and floatability of zircon.
Hyung Sup Choi and Ki Up Whang.
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3. The X-ray diffraction patterns of aluminum carbide Al_4C_3 and aluminum oxycarbide $\text{Al}_4\text{O}_4\text{C}$.
J.H. Cox and L.M. Pidgeon.
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4. Transient temperatures in slabs heated or cooled on one side.
T.Z. Harmathy and J.A.C. Blanchard.
Canad. Journ. Chem. Engg., 41 [3], 128 (1963).
5. Occurrence of the ρ -phase among chalcogenides.
O. Knop.
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6. Asbestos in the construction industry.
L.O. Montpetit.
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7. Wodginite-a new tin-manganese tantalate from Wodgina,
Australia and Bernic Lake, Manitoba.
E.H. Nickel, J.F. Rowland and R.C. McAdam.
Canad. Mineralogist, 7 [3], 390-402 (1963).
8. The spectrum of titanium nitride.
W.H. Parkinson and E.M. Reeves.
Canad. Journ. Phys., 41 [4], 702-703 (1963).
9. Uranium compounds as thermoelectric materials.
I.H. Warren.
Canad. Mining Metall. Bull., 56 [612], 285-298 (1963).

c. Mixed materials

1. Nickel-magnesia catalyst as revealed by adsorption and
electron-optical studies.
N. Ramasubramanian and L.M. Yeddanapalli.
Canad. Journ. Chem., 41 [6], 1588-1591 (1963).
2. Research in extraction metallurgy.
A.D. Turnbull.
Canad. Mining Metall. Bull., 56 [612], 271-275 (1963).

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

a. Metallic materials

Nil

b. Non-metallic materials

1. Optimum slag composition for the blast-furnace smelting
of titaniferous ores.
Atsumi Ohno and H.U. Ross.
Canad. Metall. Quart., 2 [3], 259-279 (1963).

c. Mixed materials

1. High-temperature behaviour of aluminous cement concretes containing different aggregates.
N.G. Zoldners, V.M. Malhotra and H.S. Wilson.
Mines Branch Research Report R109, July 1963.
Department of Mines and Technical Surveys, Ottawa, Canada.

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

a. Metallic materials

1. Silver (Part I).
L. Sanderson.
Canad. Mining Journ., 84 [5], 63-66 (1963).
2. Silver (Part II).
L. Sanderson.
Canad. Mining Journ., 84 [6], 64-66 (1963).

b. Non-metallic materials

Nil

c. Mixed materials

Nil

G. Phase equilibria

1. Face-centred cubic, cobalt-rich solid solutions in binary alloys with aluminum, gallium, silicon, germanium and tin.
Huey-Lin Luo and Pol Duwez.
Canad. Journ. Phys., 41 [5], 758-761 (1963).
2. Liquidus-temperature measurements in the lime-titania-alumina-silica system.
Atsumi Ohno and H.U. Ross.
Canad. Metall. Quart., 2 [3], 243-258 (1963).
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J.A. Spittle, M.D. Hunt and R.W. Smith.
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R. Thomson and J.O. Edwards.
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2. The direct steel process.
R.L. Cavanaugh and D.R. Hollingbery.
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3. The reduction of calcined dolomite by aluminum carbide.
J.H. Cox and L.M. Pidgeon.
Canad. Metall. Quartz., 2 [3], 225-231 (1963).
4. Mathematical model of the blast furnace.
P. Dancoisne.
Canad. Metall. Quartz., 2 [2], 197-219 (1963).
5. The production of ferromanganese from low-grade manganese ores using a rotary kiln and an electric smelting furnace.
W. Scott Douglas and D.H. Jurden.
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6. Kinetic studies of the thermal decomposition of calcium carbonate.
T.R. Ingraham and P. Marier.
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