ACKNOWLEDGEMENT

The author expresses his deep sense of gratitude and appreciation to Dr. V. V. Dadape for his guidance and constant encouragement throughout the period of this investigation.

It is a pleasure to acknowledge the many helpful discussions the author had with Drs. V. Damodaran, D. Chakraborty, M. P. Kulkarni and V. G. Neurgaonkar.

The author wishes to thank all his colleagues for their help in the course of this work.

The work was carried out under the PL-480 scheme "The Chemical and Thermodynamic Properties of Refractory Materials at High Temperatures", sponsored by the National Bureau of Standards, Washington, D.C. (U.S.A.)

The author also thanks the Director, National Chemical Laboratory, Poona 8 for permission to submit this work for Ph.D. in the form of a thesis.

(V.Y. Joshi)