

CONTENTS

Chapter 1	INTRODUCTION	1
Chapter 2	REVIEW OF THE SCIENCE OF CERAMIC MATERIALS	25
Chapter 3	CHEMISTRY AT HIGH TEMPERATURES: THE PROBLEM OF REDUCING CHEMICAL ATTACK	43
Chapter 4	THERMAL AND ELECTRICAL PROPERTIES	69
Chapter 5	THERMOMECHANICAL BEHAVIOR	86
Chapter 6	MECHANISM OF BRITTLE FRACTURE	133
Chapter 7	THE RELATIONSHIP OF PHYSICAL PROPERTIES, MICROSTRUCTURE, AND FABRICATION	177
Chapter 8	SOME COMMENTS ON HIGH-TEMPERATURE PROERTY DETERMINATION	187
Chapter 9	ELEMENTARY CONSIDERATIONS FOR STRUCTURAL USE	205
Chapter 10	HOT-PRESSED TRANSLUCENT OXIDES	215
Chapter 11	PYROLYTIC MATERIALS	235
Chapter 12	THE DEVELOPMENT AND EVALUATION OF HYPEREUTECTIC CARBIDES	261
Chapter 13	CARBON-COATED CARBIDE PARTICLES FOR NUCLEAR-FUEL ELEMENTS	209
Chapter 14	OXIDATION-RESISTANT GRAPHITE-BASE COMPOSITES	314
	APPENDIX REVIEW OF SELECTED PROPERTY DATA	327
	INDEX	391