

## CONTENTS / MAY 1986—VOL. 73, NO. 2

### PERFORMANCE OF BOROSILICATE GLASS HIGH-LEVEL WASTE FORMS IN DISPOSAL SYSTEMS

- 139 Preface: Performance of Borosilicate Glass High-Level Waste Forms in Disposal Systems / *Edward J. Hennelly*

### TECHNICAL PAPERS

- 140 Mechanisms of Defense Waste Glass Dissolution / *Aaron Barkatt, Barbara C. Gibson, Pedro B. Macedo, Charles J. Montrose, William Sousanpour, Alisa Barkatt, Morad-Ali Boroomand, Victor Rogers, Miguel Penafiel*
- 165 Release of Actinides from Defense Waste Glass Under Simulated Repository Conditions / *M. J. Apted, G. L. McVay, J. W. Wald*
- 179 Modeling of Waste Form Performance and System Release / *Aaron Barkatt, Pedro B. Macedo, Barbara C. Gibson, Charles J. Montrose*
- 188 International Collaboration in Nuclear Waste Solidification / *Larry L. Hench*
- 199 Long-Term Release Rates of Borosilicate Glass Waste Forms / *Pedro B. Macedo, Aaron Barkatt, Barbara C. Gibson, Charles J. Montrose*

---

### FISSION REACTORS

- 210 Analysis of High Convertor Pressure Tube Reactors / *Yigal Ronen, Yaakov Fahima*

### RADIOACTIVE WASTE MANAGEMENT

- 220 Reuse System for Powdered Ion-Exchange Resins / *Kiyomi Funabashi, Tet-suo Fukasawa, Fumio Kawamura, Hideo Yusa, Makoto Kikuchi, Noriharu Sasaki, Toshio Yamadera*
- 228 Fuel Reprocessing Versus Direct Disposal of Spent Fuel—A Comparison from the Standpoint of Radiological Safety / *Reiner Papp, Herbert Loser*

### MATERIALS

- 236 Analysis of Graphite-Hydrogen-Methane Kinetics Above 1600 K / *John D. Rogers, Alexander Sesonske*

(Continued)

#### ON THIS COVER

This month's cover is taken from a figure in the paper by M. Apted et al. and shows an artist's concept of uranium release in a brine solution.

# CONTENTS / MAY 1986—VOL. 73, NO. 2

(Continued)

## HEAT TRANSFER AND FLUID FLOW

- 243 Application of the Vortex Method to Analysis of Coolant Temperature Fluctuation / *Ken Amano, Masayoshi Ishida*

## DEPARTMENTS

- 133 Authors
- 252 Book Reviews