## Contents

## Preface ix

- 1. Metals, Metals Everywhere 1
- 2. National Struggles: Mineral Veins and Battle Lines 18
- 3. Corporate Hurdles: Monopolies and Investment Incentives 38
- 4. Production Difficulties: Acid Washes and Talent Drains 67
- 5. Trading Networks: Smugglers and Supply Hiccups 89
- 6. Tech Needs: The Electronification of Everything 115
- 7. Environmental Needs: Rare Metals Are Green 134
- 8. War Effort: Hard and Smart Metals 155
- 9. Sustainable Use: The Environmental Calculus of the Rare Metal Age 173
- 10. The War over the Periodic Table 194
- 11. How to Prosper in the Rare Metal Age 214

Notes 231 Acknowledgments 299 Index 303