

## CONTENTS

### CORONA PHENOMENA

|                                                    |   |
|----------------------------------------------------|---|
| Corona Discharge Physics and Applications. . . . . | 1 |
| R. S. Sigmond and M. Goldman                       |   |

### DISCHARGES

|                                                      |     |
|------------------------------------------------------|-----|
| Modeling of a Glow Discharge . . . . .               | 65  |
| L. Vriens, A. H. M. Smeets, and<br>H. J. Cornelissen |     |
| The Glow-To-Arc Transition . . . . .                 | 119 |
| E. Marode                                            |     |
| Arc Discharge Electrode Phenomena. . . . .           | 167 |
| G. Ecker                                             |     |
| Dynamics of Arc Discharges . . . . .                 | 181 |
| J. Hackmann                                          |     |

### DIAGNOSTICS

|                                                              |     |
|--------------------------------------------------------------|-----|
| Diagnostic Techniques for Discharges<br>and Plasmas. . . . . | 203 |
| R. T. Waters                                                 |     |
| Spectroscopic Diagnostics in Gas Discharges. . . . .         | 267 |
| F. Bastien                                                   |     |

### PLASMA CHEMISTRY

|                            |     |
|----------------------------|-----|
| Plasma Chemistry . . . . . | 293 |
| A. Goldman and J. Amouroux |     |

## HIGH FREQUENCY DISCHARGES

|                                                               |     |
|---------------------------------------------------------------|-----|
| Microwave Discharges. . . . .                                 | 347 |
| J. Marec, E. Bloyet, M. Chaker, P. Leprince,<br>and P. Nghiem |     |

## APPLICATIONS

|                                   |     |
|-----------------------------------|-----|
| Plasma Applications . . . . .     | 383 |
| M. Kristiansen and A. H. Guenther |     |

## SEMINARS

|                                                                                      |     |
|--------------------------------------------------------------------------------------|-----|
| Diffuse Discharge Opening Switches. . . . .                                          | 415 |
| K. Schoenbach, G. Schaefer, M.<br>Kristiansen, L. L. Hatfield, and<br>A. H. Guenther |     |

|                                                                                                        |     |
|--------------------------------------------------------------------------------------------------------|-----|
| The Electroluminescence of Pure Noble<br>Gases Below the Threshold for<br>Electron Avalanche . . . . . | 429 |
| C. A. N. Conde, M. F. A. Ferreira,<br>T. H. V. T. Dias, and A. D. Stauffer                             |     |

|                                         |     |
|-----------------------------------------|-----|
| Plasma Formation in a Tokamak . . . . . | 443 |
| R. D. Bengtson and J. F. Benesch        |     |

## APPENDIX

|                                                                               |     |
|-------------------------------------------------------------------------------|-----|
| Notes on Symbols, Units and Nomenclature<br>in Gas Discharge Physics. . . . . | 451 |
| R. S. Sigmond                                                                 |     |

|                        |     |
|------------------------|-----|
| PARTICIPANTS . . . . . | 459 |
|------------------------|-----|

|                 |     |
|-----------------|-----|
| INDEX . . . . . | 467 |
|-----------------|-----|