

Table of Contents

Preface

Laser Selective Chemistry

S.K. Sarkar and J.P. Mittal 1

Laser Induced Fluorescence in Kinetic Studies of Atmospheric Chemical Reactions

A. Mellouki and G. Le Bras 47

Surface Modification of Inorganic Materials Using Excimer Lasers

A.J. Pedraza 69

Laser-Aided Imaging Diagnostics of Laser-Ablation Plume

T. Okada 95

Ultra-Short-Pulse Laser Irradiation and Ablation of Dielectrics

E.E.B. Campbell, D. Ashkenasi and A. Rosenfeld 123

Ion-Beam and Laser-Induced Modification of Surfaces

R. Kelly and A. Miotello 145

Laser-Induced Temperature Rise in Isotropic and Anisotropic Media

Y.F. Lu and Z.M. Ren 191

Laser Alloying and Laser Cladding

R. Vilar 229

Lasers for Industrial Applications in Material Processing

W.D. Scharfe and W. Rath 253

Laser Radiation as a Tool to Generate Well Defined Thin Ceramic Films for Applications

E.W. Kreutz, J. Gottmann, A. Husmann and M. Sommer 287