

Table of Contents

Preface

The Contribution of Nanotechnology for Removal of Water Pollutants S. Anandan	1
Application of Titanium Dioxide (TiO₂) Based Photocatalytic Nanomaterials in Solar and Hydrogen Energy: A Short Review A. Al-Ahmed, B. Mukhtar, S. Hossain, S.M. Javaid Zaidi and S.U. Rahman	25
The Influence of Carbon Doping on TiO₂ Nanoparticle Size, Surface Area, Anatase to Rutile Phase Transformation and Photocatalytic Activity P. Nyamukamba, L. Tichagwa and C. Greyling	49
Photocatalytic Cement by TiO₂ Addition P. Periyat, A.S. Divya and K.G.K. Warriar	65
Photocatalytic Activity of Sol-Gel Derived Bi₂O₃-TiO₂ Nanocomposite C. Karunakaran, P. Magesan and P. Gomathisankar	73
Photocatalytic Activity of Transition Metal Ion Doped Titania for Amaranth Dye Degradation N. Divya, A. Bansal and A.K. Jana	85
Photocatalytic Degradation Studies of J-Acid under Visible Light and Ultrasonic Activation Using Dye Sensitised TiO₂ S. Kaur and V. Singh	105
Enhancement of Photocatalytic Activity of TiO₂ Thin Film Using Diethanolamine and MCM-41 A.K. Karki, N. Grisdanurak and S. Chiarakorn	117
Novel Photocatalytic Ag/TiO₂ Thin Film on Polyvinyl Chloride for Gaseous BTEX Treatment P. Peerakiatkhajorn, C. Chawengkijwanich, W. Onreabroy and S. Chiarakorn	133
Treatment Methods for the Remediation of Amines: A Review Pankaj, M. Verma, S. Goyal and P.K. Patnala	147
Titanium Dioxide Catalyzed Photocatalytic Degradation of Carboxylic Acids from Waste Water: A Review V. Gandhi, M. Mishra and P.A. Joshi	175
Photocatalysts and Photoreactors for Treatment of Industrial Effluents N.R. Neti	191