

Table of Contents

Preface

Photocatalytic Reduction of Carbon Dioxide by Water: A Step towards Sustainable Fuels and Chemicals	
V. Jeyalakshmi, R. Mahalakshmy, K.R. Krishnamurthy and B. Viswanathan	1
Photocatalysts for Solar-Induced Water Disinfection: New Developments and Opportunities	
W.J. Wang, J.C. Yu and P.K. Wong	63
Preparation and Characterization of Li-Doped ZnO Nano-Sized Powders for Photocatalytic Applications	
I. Ganesh, P.S.C. Sekhar, G. Padmanabham and G. Sundararajan	90
Degradation of Tannic Acid Powered by TiO₂ Nanoparticles	
N.L. Kruthika, G.B. Raju and S. Prabhakar	117
Facile Fabrication of Single Crystalline Ceria Nanoparticles for Photo-Responsive Applications	
D.P. Das, A. Dash and B.K. Mishra	127
Current Perspective of Semiconductor and its Composites with Unusual Surfaces for the Use of Photocatalysis: Review	
T. Selvamani and S. Anandan	138
Recent Development on Titania Based Mixed Oxide Photocatalysts for Environmental Application under Visible Light	
N. Aman and T. Mishra	186
Photolysis and Photocatalysis of 1,4 Dichlorobenzene Using Sputtered TiO₂ Thin Films	
S.A. Mahmoud, E. Yassitepe and S.I. Shah	215
Photo-Catalytic Activity of Carbon/Nitrogen Doped TiO₂-SiO₂ under UV and Visible Light Irradiation	
H.H. Mungondori and L. Tichagwa	226
Sonochemical Decolourisation of Reactive Blue 21 and Acid Red 114 in the Presence of TiO₂ and Rare Earths	
Pankaj and S. Goyal	237
Photocatalytic Degradation of Organic Pollutants: A Review	
R. Ameta, S. Benjamin, A. Ameta and S.C. Ameta	247
Environmental Application of Photocatalysis	
S. Chaturvedi and P.N. Dave	273
Manganese Loaded on Titania Surface by Impregnation Method for Photocatalytic Degradation of Reactive Red-3 Dye	
K. Wantala, A. Tosuwan and N. Grisdanurak	295
Photocatalytic Degradation of Alachlor on Fe-TiO₂-Immobilized on GAC under Black Light Irradiation Using Box-Behnken Design	
K. Wantala, S. Neramittagapong, A. Neramittagapong, K. Kasipar, S. Khaownetr and S. Chuichulcherm	306
Degradation of Acid Red 27 in Sunlight Using TiO₂	
J. Kumar and A. Bansal	317
Photocatalytic Degradation of Dyes by Al₂O₃-TiO₂ and ZrO₂-TiO₂ Nanocomposites	
C. Karunakaran, P. Magesan, P. Gomathisankar and P. Vinayagamoorthy	325
Photocatalytic and Photoelectro-Chemical Study of Ferrites for Water Splitting Applications: A Comparative Study	
R. Dom and P. Borse	334
Nano-Photocatalysts in the Treatment of Colored Wastewater - A Review	
N. Divya, A. Bansal and A.K. Jana	349
Metal Doped Titanium Dioxide: Synthesis and Effect of Metal Ions on Physico-Chemical and Photocatalytic Properties	
S.I. Mogal, M. Mishra, V.G. Gandhi and R.J. Tayade	364