Photochromic Materials: Preparation, Properties and Applications

He Tian, Junji Zhang

DESCRIPTION

Summarizing all the latest trends and recent topics in one handy volume, this book covers everything needed for a solid understanding of photochromic materials. Following a general introduction to organic photochromic materials, the authors move on to discuss not only the underlying theory but also the properties of such materials. After a selection of applications, they look at the latest achievements in traditional solution-phase applications, including photochromic-based molecular logic operations and memory, optically modulated supramolecular system and sensors, as well as light-tunable chemical reactions. The book then describes the hotspot areas of photo-switchable surfaces and nanomaterials, photochromic-based luminescence/electronic devices and bulk materials together with light-regulated biological and bio-chemical systems. The authors conclude with a focus on current industrial applications and the future outlook for these materials.

Written with both senior researchers and entrants to the field in mind.

ABOUT THE AUTHOR

He Tian received his PhD in 1989 from the East China University of Science & Technology (ECUST) in Shanghai, China. From 1991 to 1993, he stayed at the University of Siegen, Germany, as a postdoc supported by the Alexander von Humboldt Foundation. In 1999, he was appointed Cheung Kong Distinguished Professor by the Education Ministry of China. He was selected...
as a member of the Chinese Academy of Science (2011) and a Fellow of The World Academy of Sciences (TWAS) for the advancement of science in developing countries (2013).

His current research interests include the syntheses of novel functional organic dyes and development of interdisciplinary materials science that determines the electronic and optical properties of materials.

Junji Zhang received his PhD from East China University of Science and Technology (ECUST) in Shanghai, China, in 2012 under the supervision of Professor He Tian. From 2010 to 2011, he stayed at the Hebrew University of Jerusalem, Israel, as an exchange doctoral student supported by the Chinese Scholarship Council (CSC). He is currently working as a lecturer, and his research interests are mainly focused on the photochromic materials, functional organic dyes and supramolecular switches.

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