

# Contents

## Part I General Aspects

<b>Interfacial Behavior of Fluorescent Dyes. Power and Weakness of Nanoscopic Description</b> .....	3
Alexander P. Demchenko and Semen O. Yesylevskyy	

## Part II Probing Condensed Media

<b>Fluorescence Probing of the Physicochemical Characteristics of the Room Temperature Ionic Liquids</b> .....	65
Anunay Samanta	
<b>Fluorescence Spectroscopy in Polymer Science</b> .....	91
Tanzeela N. Raja and Albert M. Brouwer	
<b>Fluorescence Probing in Structurally Anisotropic Materials. From Liquid Crystals to Macromolecules, Micelles and Lipid Bilayers</b> .....	119
Semen O. Yesylevskyy and Alexander P. Demchenko	

## Part III Fluorescence Reporters in Biosensing

<b>Optimized Dyes for Protein and Nucleic Acid Detection</b> .....	161
Sergiy M. Yarmoluk, Vladyslava B. Kovalska, and Kateryna D. Volkova	
<b>Functional Nucleic Acids for Fluorescence-Based Biosensing Applications</b> .....	201
Jennifer Lee, Lawrence Lin, and Yingfu Li	

## Part IV Cell Imaging with Organic Dyes

<b>Covalent Labeling of Biomolecules in Living Cells</b> .....	225
Tilman Plass and Carsten Schultz	

<b>Tetracysteine and Bipartite Tags for Biarsenical Organic Fluorophores</b> .....	263
Carla Spagnuolo, María Joselevich, Federico Coluccio Leskow, and Elizabeth A. Jares-Erijman	
<b>Labeling of Oligohistidine-Tagged Proteins</b> .....	297
Jacob Piehler	
<b>Part V Tissue and Whole Body Imaging</b>	
<b>In Vivo Imaging of Vascular Targets Using Near-Infrared Fluorescent Probes</b> .....	313
Jan Klohs and Markus Rudin	
<b>Whole-Body Imaging of Hematopoietic and Cancer Cells Using Near-Infrared Probes</b> .....	329
Vyacheslav Kalchenko, Michal Neeman, and Alon Harmelin	
<b>Index</b> .....	347



<http://www.springer.com/978-3-642-18034-7>

Advanced Fluorescence Reporters in Chemistry and  
Biology III

Applications in Sensing and Imaging

Demchenko, A.P. (Ed.)

2011, X, 352 p., Hardcover

ISBN: 978-3-642-18034-7