

1. Record Nr.	UNINA9910818071903321
Titolo	Aggregation-induced emission : applications // edited by Anjun Qin and Ben Zhong Tang
Pubbl/distr/stampa	Chichester, West Sussex : , : John Wiley & Sons, , 2013
ISBN	1-118-70177-1 1-118-70161-5 1-118-70158-5
Descrizione fisica	1 online resource (293 p.)
Altri autori (Persone)	QinAnjun TangBen Zhong
Disciplina	620.11295
Soggetti	Electroluminescent devices Optoelectronic devices
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di contenuto	Aggregation-Induced Emission: Applications; Contents; List of Contributors; Preface; 1 AIE or AIEE Materials for Electroluminescence Applications; 1.1 Introduction; 1.2 EL Background, EL Efficiency, Color Chromaticity, and Fabrication Issues of OLEDs; 1.3 AIE or AIEE Silole Derivatives for OLEDs; 1.4 AIE or AIEE Maleimide and Pyrrole Derivatives for OLEDs; 1.5 AIE or AIEE Cyano-Substituted Stilbenoid and Distyrylbenzene Derivatives for OLEDs; 1.6 AIE or AIEE Triarylamine Derivatives for OLEDs; 1.7 AIE or AIEE Triphenylethene and Tetraphenylethene Derivatives for OLEDs 1.8 White OLEDs Containing AIE or AIEE Materials1.9 Perspectives; References; 2 Crystallization-Induced Phosphorescence for Purely Organic Phosphors at Room Temperature and Liquid Crystals with Aggregation-Induced Emission Characteristics; 2.1 Crystallization-Induced Phosphorescence for Purely Organic Phosphors at Room Temperature; 2.1.1 Introduction; 2.1.2 Molecular luminogens with crystallization-induced phosphorescence at room temperature; 2.2 Liquid Crystals with Aggregation-Induced Emission Characteristics; 2.2.1 Luminescent liquid crystals 2.2.2 Aggregation-induced emission strategy towards high-efficiency

luminescent liquid crystals2.3 Conclusions and Perspectives;
References; 3 Mechanochromic Aggregation-Induced Emission
Materials; 3.1 Introduction; 3.2 Mechanochromic Non-AIE Compounds;
3.3 Mechanochromic AIE Compounds; 3.4 Conclusion; References; 4
Chiral Recognition and Enantiomeric Excess Determination Based on
Aggregation-Induced Emission; 4.1 Introduction to Chiral Recognition;
4.2 Chiral Recognition and Enantiomeric Excess Determination of Chiral
Amines
4.3 Chiral Recognition and Enantiomeric Excess Determination of Chiral
Acids4.3.1 Enantiomeric excess determination of chiral acids using
chiral AIE amines; 4.3.2 Enantiomeric excess determination of chiral
acids using a chiral receptor in the presence of an AIE compound; 4.4
Mechanism of Chiral Recognition Based on AIE; 4.4.1 Mechanism of
chiral recognition by a chiral AIE monoamine; 4.4.2 Mechanism of chiral
recognition by a chiral AIE diamine; 4.5 Prospects for Chiral
Recognition Based on AIE; References
5 AIE Materials Towards Efficient Circularly Polarized Luminescence,
Organic Lasing, and Superamplified Detection of Explosives5.1
Introduction; 5.2 AIE Materials with Efficient Circularly Polarized
Luminescence and Large Dissymmetry Factor; 5.2.1 Aggregation-
induced circular dichroism; 5.2.2 AIE, fluorescence decay dynamics and
theoretical understanding; 5.2.3 Aggregation-induced circularly
polarized luminescence; 5.2.4 Supramolecular assembly and structural
modeling; 5.3 AIE Materials for Organic Lasing; 5.3.1 Fabrication of
nano-structures; 5.3.2 Lasing performances
5.4 AIE Materials for Superamplified Detection of Explosives

Sommario/riassunto

Aggregation-Induced Emission (AIE) is a novel photophysical phenomenon which offers a new platform APPLICATIONS for researchers to look into the light-emitting processes from luminogen aggregates, from which useful information on structure-property relationships may be collected and mechanistic insights may be gained. The discovery of the AIE effect opens a new avenue for the development of new luminogen materials in the aggregate or solid state. By enabling light emission in the practically useful solid state, AIE has the potential to significantly expand the technological applications of
