Mukundan Thelakkat

List of Publications by Citations

238 papers	10,304 citations	53 h-index	92 g-index
263 ext. papers	11,137 ext. citations	6.8 avg, IF	6.46 L-index

#	Paper	IF	Citations
238	Star-Shaped, Dendrimeric and Polymeric Triarylamines as Photoconductors and Hole Transport Materials for Electro-Optical Applications. *Macromolecular Materials and Engineering*, **2002**, 287, 442	3.9	384
237	Synthesis and Properties of Novel Derivatives of 1,3,5-Tris(diarylamino)benzenes for Electroluminescent Devices. *Advanced Materials*, **1998**, 10, 219-223	24	334
236	Highly efficient solar cells using TiO(2) nanotube arrays sensitized with a donor-antenna dye. *Nano Letters*, **2008**, 8, 1654-9	11.5	256
235	Systematic investigation of the role of compact TiO2 layer in solid state dye-sensitized TiO2 solar cells. *Coordination Chemistry Reviews*, **2004**, 248, 1479-1489	23.2	244
234	Capturing the Sun: A Review of the Challenges and Perspectives of Perovskite Solar Cells. *Advanced Energy Materials*, **2017**, 7, 1700264	21.8	235
233	Characterization of the adsorption of Ru-bpy dyes on mesoporous TiO2 films with UV-Vis, Raman, and FTIR spectroscopies. *Journal of Physical Chemistry B*, **2006**, 110, 8723-30	3.4	233
232	Supermolecular control of charge transfer in dye-sensitized nanocrystalline TiO2 films: towards a quantitative structure-function relationship. *Angewandte Chemie - International Edition*, **2005**, 44, 5740-4	16.4	216
231	Swallow-tail substituted liquid crystalline perylene bisimides: synthesis and thermotropic properties. *Journal of the American Chemical Society*, **2009**, 131, 14442-53	16.4	200
230	Crystalline-crystalline donor-acceptor block copolymers. *Angewandte Chemie - International Edition*, **2008**, 47, 7901-4	16.4	199
229	Charge separation at self-assembled nanostructured bulk interface in block copolymers. *Angewandte Chemie - International Edition*, **2006**, 45, 3364-8	16.4	194
228	Temperature and Molecular Weight Dependent Hierarchical Equilibrium Structures in Semiconducting Poly(3-hexylthiophene). *Macromolecules*, **2010**, 43, 4646-4653	5.5	183
227	Control of aggregate formation in poly(3-hexylthiophene) by solvent, molecular weight, and synthetic method. *Journal of Polymer Science, Part B: Polymer Physics*, **2012**, 50, 442-453	2.6	181
226	Highly Efficient Solid-State Dye-Sensitized TiO2 Solar Cells Using Donor-Antenna Dyes Capable of Multistep Charge-Transfer Cascades. *Advanced Materials*, **2007**, 19, 1091-1095	24	175
225	Solid-state dye-sensitized solar cells using red and near-IR absorbing Bodipy sensitizers. *Organic Letters*, **2010**, 12, 3812-5	6.2	168
224	Microphase-Separated Donor–Acceptor Diblock Copolymers: Influence of HOMO Energy Levels and Morphology on Polymer Solar Cells. *Advanced Functional Materials*, **2007**, 17, 1493-1500	15.6	160
223	Donor–acceptor block copolymers for photovoltaic applications. *Journal of Materials Chemistry*, **2010**, 20, 10788		147
222	Nanostructures of n-Type Organic Semiconductor in a p-Type Matrix via Self-Assembly of Block Copolymers. *Macromolecules*, **2004**, 37, 8832-8835	5.5	141

221	Plasmonic nanomeshes: their ambivalent role as transparent electrodes in organic solar cells. *Scientific Reports*, **2017**, 7, 42530	4.9	140
220	Fully Vapor-Deposited Thin-Layer Titanium Dioxide Solar Cells. *Advanced Materials*, **2002**, 14, 577	24	139
219	Toward Perfect Control of End Groups and Polydispersity in Poly(3-hexylthiophene) via Catalyst Transfer Polymerization. *Macromolecules*, **2011**, 44, 3388-3397	5.5	136
218	Self-assembly of semiconductor organogelator nanowires for photoinduced charge separation. *ACS Nano*, **2009**, 3, 1107-14	16.7	123
217	High Crystallinity and Nature of Crystal□Crystal Phase Transformations in Regioregular Poly(3-hexylthiophene). *Macromolecules*, **2010**, 43, 9401-9410	5.5	118
216	A high transconductance accumulation mode electrochemical transistor. *Advanced Materials*, **2014**, 26, 7450-5	24	116
215	Lithium□Quinolate Complexes as Emitter and Interface Materials in Organic Light-Emitting Diodes. *Chemistry of Materials*, **2000**, 12, 3012-3019	9.6	111
214	Synthesis and Characterization of Aromatic Poly(1,3,5-triazine□ether)s for Electroluminescent Devices. *Macromolecules*, **1997**, 30, 8177-8181	5.5	109
213	Effect of Thermal and Structural Disorder on the Electronic Structure of Hybrid Perovskite Semiconductor CH3NH3PbI3. *Journal of Physical Chemistry Letters*, **2016**, 7, 3014-21	6.4	108
212	The role of PbI in CHNHPbI perovskite stability, solar cell parameters and device degradation. *Physical Chemistry Chemical Physics*, **2017**, 20, 605-614	3.6	106
211	Colloidal self-assembly concepts for light management in photovoltaics. *Materials Today*, **2015**, 18, 185-205	21.8	105
210	Polymeric Light-Emitting Diodes Based on Poly(p-phenylene ethynylene), Poly(triphenyldiamine), and Spiroquinoxaline. *Advanced Functional Materials*, **2001**, 11, 41-46	15.6	104
209	Low molecular weight and polymeric heterocyclics as electron transport/hole-blocking materials in organic light-emitting diodes. *Polymers for Advanced Technologies*, **1998**, 9, 429-442	3.2	102
208	n-type organic field effect transistors from perylene bisimide block copolymers and homopolymers. *Applied Physics Letters*, **2008**, 92, 093302	3.4	99
207	Optical and Electronic Contributions in Double-Heterojunction Organic Thin-Film Solar Cells. *Advanced Materials*, **2003**, 15, 2056-2060	24	99
206	Synthesis of Amphiphilic Rod□Coil P3HT-b-P4VP Carrying a Long Conjugated Block Using NMRP and Click Chemistry. *Macromolecules*, **2012**, 45, 3070-3077	5.5	96
205	Synthesis and Application of Dimeric 1,3,5-Triazine Ethers as Hole-Blocking Materials in Electroluminescent Devices. *Chemistry of Materials*, **1998**, 10, 3620-3625	9.6	96
204	Reducing charge recombination losses in solid state dye sensitized solar cells: the use of donor-acceptor sensitizer dyes. *Chemical Communications*, **2007**, 1725-7	5.8	79

203	Characterization of perovskite solar cells: Towards a reliable measurement protocol. *APL Materials*, **2016**, 4, 091901	5.7	79
202	High Bulk Electron Mobility Diketopyrrolopyrrole Copolymers with Perfluorothiophene. *Advanced Functional Materials*, **2015**, 25, 2725-2736	15.6	78
201	A Combinatorial Study of the Dependence of Organic LED Characteristics on Layer Thickness. *Advanced Materials*, **1999**, 11, 821-826	24	78
200	Influence of molecular weight on the solar cell performance of double-crystalline donor-acceptor block copolymers. *Applied Physics Letters*, **2009**, 95, 183308	3.4	77
199	Correlation of charge transport with structural order in highly ordered melt-crystallized poly(3-hexylthiophene) thin films. *Journal of Polymer Science, Part B: Polymer Physics*, **2013**, 51, 943-951	2.6	72
198	Spectroscopic Signature of Two Distinct H-Aggregate Species in Poly(3-hexylthiophene). *Macromolecules*, **2015**, 48, 1543-1553	5.5	68
197	Key aspects of individual layers in solid-state dye-sensitized solar cells and novel concepts to improve their performance. *Inorganica Chimica Acta*, **2008**, 361, 635-655	2.7	68
196	Synthesis and Characterization of Bifunctional Polymers Carrying Tris(bipyridyl)ruthenium(II) and Triphenylamine Units. *Macromolecules*, **2003**, 36, 1779-1785	5.5	65
195	Synthesis and Characterization of Highly Fluorescent Main-Chain Copolyimides Containing Perylene and Quinoxaline Units. *Macromolecules*, **2001**, 34, 7441-7447	5.5	64
194	Determination of the Crystallinity of Semicrystalline Poly(3-hexylthiophene) by Means of Wide-Angle X-ray Scattering. *Macromolecules*, **2013**, 46, 9642-9651	5.5	61
193	Influence of doping on charge carrier collection in normal and inverted geometry polymer:fullerene solar cells. *Scientific Reports*, **2013**, 3,	4.9	57
192	Highly efficient solid-state dye-sensitized TiO2 solar cells via control of retardation of recombination using novel donor-antenna dyes. *Solar Energy Materials and Solar Cells*, **2007**, 91, 432-439	6.4	57
191	Nanostructured semiconductor block copolymers: π-stacking, optical and electrochemical properties. *Organic Electronics*, **2007**, 8, 69-75	3.5	56
190	Environmental exposure enhances the internalization of microplastic particles into cells. *Science Advances*, **2020**, 6,	14.3	55
189	Mutual interplay of light harvesting and triplet sensitizing in a perylene bisimide antenna-fullerene dyad. *Journal of Physical Chemistry B*, **2010**, 114, 9148-56	3.4	54
188	Phase Separation in the Melt and Confined Crystallization as the Key to Well-Ordered Microphase Separated Donor–Acceptor Block Copolymers. *Macromolecules*, **2013**, 46, 4403-4410	5.5	53
187	Influence of the solvent on the surface-enhanced raman spectra of ruthenium(II) bipyridyl complexes. *Journal of Physical Chemistry B*, **2005**, 109, 5783-9	3.4	53
186	Poly(triarylamine)s- synthesis and application in electroluminescent devices and photovoltaics. *Synthetic Metals*, **1999**, 102, 1125-1128	3.6	53

185	Role of PCBM in the Suppression of Hysteresis in Perovskite Solar Cells. *Advanced Functional Materials*, **2020**, 30, 1908920	15.6	52
184	Tailor-made synthesis of poly(3-hexylthiophene) with carboxylic end groups and its application as a polymer sensitizer in solid-state dye-sensitized solar cells. *Journal of Materials Chemistry*, **2009**, 19, 4126		52
183	Conjugated Donor Polymers: Structure Formation and Morphology in Solution, Bulk and Photovoltaic Blends. *Advanced Energy Materials*, **2017**, 7, 1700314	21.8	51
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180	Synthesis, spectral, electrochemical and photovoltaic properties of novel heteroleptic polypyridyl ruthenium(II) donor-antenna dyes. *Journal of Materials Chemistry*, **2009**, 19, 5364		50
179	Novel functional materials based on triarylamines: synthesis and application in electroluminescent devices and photorefractive systems. *Physical Chemistry Chemical Physics*, **1999**, 1, 1693-1698	3.6	50
178	A cracked polymer templated metal network as a transparent conducting electrode for ITO-free organic solar cells. *Physical Chemistry Chemical Physics*, **2014**, 16, 15107-10	3.6	49
177	An organic optical transistor operated under ambient conditions. *Angewandte Chemie - International Edition*, **2011**, 50, 11405-8	16.4	49
176	The Impact of Polydispersity and Molecular Weight on the Order-Disorder Transition in Poly(3-hexylthiophene). *Journal of Physical Chemistry Letters*, **2014**, 5, 2742-7	6.4	47
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174	Perylenediimides with electron transport moieties for electroluminescent devices. *Synthetic Metals* , **1999**, 102, 1110-1112	3.6	47
173	Enhancing the solar cell efficiency through pristine 1-dimentional SnO2 nanostructures: Comparison of charge transport and carrier lifetime of SnO2 particles vs. nanorods. *Electrochimica Acta*, **2012**, 72, 192-198	6.7	46
172	The Key Role of Side Chain Linkage in Structure Formation and Mixed Conduction of Ethylene Glycol Substituted Polythiophenes. *ACS Applied Materials & Interfaces*, **2020**, 12, 13029-13039	9.5	43
171	Combinatorial study of the long-term stability of organic thin-film solar cells. *Applied Physics Letters* , **2002**, 81, 2106-2108	3.4	43
170	Photorefractive triphenylamine-based glass: a multifunctional low molecular weight compound with fast holographic response. *Journal of Materials Chemistry*, **1999**, 9, 2205-2210		43
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168	Dual-functional materials for interface modifications in solid-state dye-sensitised TiO2 solar cells. *Applied Physics A: Materials Science and Processing*, **2004**, 79, 65-71	2.6	41

167	Efficient screening of electron transport material in multi-layer organic light emitting diodes by combinatorial methods. *Physical Chemistry Chemical Physics*, **1999**, 1, 1777-1781	3.6	41
166	Semiconductor Block Copolymer Nanocomposites with Lamellar Morphology via Self-Organization. *Macromolecules*, **2008**, 41, 6081-6088	5.5	39
165	Electron-Conducting Block Copolymers: Morphological, Optical, and Electronic Properties. *Advanced Materials*, **2008**, 20, 2523-2527	24	39
164	Control of Molecular Orientation in Polydiketopyrrolopyrrole Copolymers via Diffusive Noncovalent Interactions. *Chemistry of Materials*, **2016**, 28, 7088-7097	9.6	38
163	Impact of excess PbI2 on the structure and the temperature dependent optical properties of methylammonium lead iodide perovskites. *Journal of Materials Chemistry C*, **2018**, 6, 7512-7519	7.1	38
162	High-Performance Organic Electrochemical Transistors Based on Conjugated Polyelectrolyte Copolymers. *Chemistry of Materials*, **2019**, 31, 5286-5295	9.6	38
161	Synthesis and Characterization of Donor□Bridge□Acceptor Molecule Containing Tetraphenylbenzidine and Perylene Bisimide. *Chemistry of Materials*, **2007**, 19, 88-94	9.6	38
160	Crystalline vs Liquid Crystalline Perylene Bisimides: Improved Electron Mobility via Substituent Alteration. *Journal of Physical Chemistry C*, **2014**, 118, 92-102	3.8	37
159	Complementary co-sensitization of an aggregating squaraine dye in□solid-state dye-sensitized solar cells. *Dyes and Pigments*, **2013**, 99, 1101-1106	4.6	37
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156	Controlled Synthesis of Water-Soluble Conjugated Polyelectrolytes Leading to Excellent Hole Transport Mobility. *Chemistry of Materials*, **2014**, 26, 1992-1998	9.6	36
155	Heteroleptic ruthenium complex containing substituted triphenylamine hole-transport unit as sensitizer for stable dye-sensitized solar cell. *Nano Energy*, **2012**, 1, 6-12	17.1	36
154	Reversible Laser-Induced Amplified Spontaneous Emission from Coexisting Tetragonal and Orthorhombic Phases in Hybrid Lead Halide Perovskites. *Advanced Optical Materials*, **2016**, 4, 917-928	8.1	35
153	Tunable charge transport using supramolecular self-assembly of nanostructured crystalline block copolymers. *ACS Nano*, **2011**, 5, 3506-15	16.7	35
152	Electroluminescent Behavior of a Homologous Series of Phenylenevinylene Oligomers. *Advanced Materials*, **1999**, 11, 119-123	24	35
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150	Synthesis of low melting hole conductor systems based on triarylamines and application in dye sensitized solar cells. *Synthetic Metals*, **2001**, 121, 1573-1574	3.6	33

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141	Materials Screening and Combinatorial Development of Thin Film Multilayer Electro-Optical Devices. *Macromolecular Rapid Communications*, **2004**, 25, 204-223	4.8	28
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134	Synthesis, mesomorphism and electrochemical properties of tetrasubstituted zinc and copper phthalocyanines. *Journal of Materials Chemistry*, **2009**, 19, 3161		26
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124	Influence of Composition of Amphiphilic Double-Crystalline P3HT-b-PEG Block Copolymers on Structure Formation in Aqueous Solution. *Macromolecules*, **2016**, 49, 5484-5493	5.5	23
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122	Supermolecular Control of Charge Transfer in Dye-Sensitized Nanocrystalline TiO2 Films: Towards a Quantitative StructureFunction Relationship. *Angewandte Chemie*, **2005**, 117, 5886-5890	3.6	23
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120	Influence of fluorination in extended backbone polydiketopyrrolopyrroles on charge carrier mobility and depth-dependent molecular alignment. *Journal of Materials Chemistry C*, **2015**, 3, 8916-8925	7.1	22
119	Morphology, Crystal Structure and Charge Transport in Donor-Acceptor Block Copolymer Thin Films. *ACS Applied Materials & Interfaces*, **2015**, 7, 12309-18	9.5	22
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116	Determination of charge carrier mobility of hole transporting polytriarylamine-based diodes. *Thin Solid Films*, **2010**, 518, 3351-3354	2.2	22
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93	Surface induced orientation and vertically layered morphology in thin films of poly(3-hexylthiophene) crystallized from the melt. *Journal of Materials Research*, **2017**, 32, 1957-1968	2.5	16
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91	EDOT□iketopyrrolopyrrole copolymers for polymer solar cells. *Journal of Materials Chemistry A*, **2016**, 4, 3477-3486	13	16
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86	Towards the characterization of energy-transfer processes in organic donor□cceptor dyads based on triphenyldiamine and perylenebisimides. *Chemical Physics*, **2006**, 328, 403-409	2.3	15
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