RocÃ-o Ponce Ortiz

List of Publications by Year
in descending order

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100 papers	7,080 citations	81839 39 h-index	56687 83 g-index
105 all docs	105 docs citations	105 times ranked	7621 citing authors

#	Article	IF	Citations
1	Polymer solar cells with enhanced fill factors. Nature Photonics, 2013, 7, 825-833.	15.6	887
2	High-k Organic, Inorganic, and Hybrid Dielectrics for Low-Voltage Organic Field-Effect Transistors. Chemical Reviews, 2010, 110, 205-239.	23.0	801
3	A Naphthodithiophene-Diketopyrrolopyrrole Donor Molecule for Efficient Solution-Processed Solar Cells. Journal of the American Chemical Society, 2011, 133, 8142-8145.	6.6	474
4	Diindeno-fusion of an anthracene as a design strategy for stable organic biradicals. Nature Chemistry, 2016, 8, 753-759.	6.6	302
5	Bithiopheneimideâ€“Dithienosilole/Dithienogermole Copolymers for Efficient Solar Cells: Information from Structureâ€“Propertyâ€“Device Performance Correlations and Comparison to Thieno[3,4-c]pyrrole-4,6-dione Analogues. Journal of the American Chemical Society, 2012, 134, 18427-18439.	6.6	257
6	Thieno[3,4-c]pyrrole-4,6-dione-Based Polymer Semiconductors: Toward High-Performance, Air-Stable Organic Thin-Film Transistors. Journal of the American Chemical Society, 2011, 133, 13685-13697.	6.6	232
7	Bithiophene-Imide-Based Polymeric Semiconductors for Field-Effect Transistors: Synthesis, Structureâ”Property Correlations, Charge Carrier Polarity, and Device Stability. Journal of the American Chemical Society, 2011, 133, 1405-1418.	6.6	231
8	Quinoidal oligothiophenes: new properties behind an unconventional electronic structure. Chemical Society Reviews, 2012, 41, 5672.	18.7	230
9	Combining Electron-Neutral Building Blocks with Intramolecular â€œConformational Locksâ€•Affords Stable, High-Mobility P- and N-Channel Polymer Semiconductors. Journal of the American Chemical Society, 2012, 134, 10966-10973.	6.6	220
10	Dialkoxybithiazole: A New Building Block for Head-to-Head Polymer Semiconductors. Journal of the American Chemical Society, 2013, 135, 1986-1996.	6.6	184
11	(Semi)ladder-Type Bithiophene Imide-Based All-Acceptor Semiconductors: Synthesis, Structureâ€“Property Correlations, and Unipolar n-Type Transistor Performance. Journal of the American Chemical Society, 2018, 140, 6095-6108.	6.6	178
12	Bithiophene Imide and Benzodithiophene Copolymers for Efficient Inverted Polymer Solar Cells. Advanced Materials, 2012, 24, 2242-2248.	11.1	158
13	On the Biradicaloid Nature of Long Quinoidal Oligothiophenes: Experimental Evidence Guided by Theoretical Studies. Angewandte Chemie - International Edition, 2007, 46, 9057-9061.	7.2	143
14	Fundamental Performance Limits of Carbon Nanotube Thin-Film Transistors Achieved Using Hybrid Molecular Dielectrics. ACS Nano, 2012, 6, 7480-7488.	7.3	142
15	Organic n-Channel Field-Effect Transistors Based on Arylenediimide-Thiophene Derivatives. Journal of the American Chemical Society, 2010, 132, 8440-8452.	6.6	134
16	Closely packed, low reorganization energy Ï€-extended postfullerene acceptors for efficient polymer solar cells. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E8341-E8348.	3.3	126
17	Ladderâ€type Heteroarenes: Up to 15 Rings with Five Imide Groups. Angewandte Chemie - International Edition, 2017, 56, 9924-9929.	7.2	105
18	Stable Organic Diradicals Based on Fused Quinoidal Oligothiophene Imides with High Electrical Conductivity. Journal of the American Chemical Society, 2020, 142, 4329-4340.	6.6	95

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19	Marked Consequences of Systematic Oligothiophene Catenation in Thieno[3,4-c]pyrrole-4,6-dione and Bithiopheneimide Photovoltaic Copolymers. Journal of the American Chemical Society, 2015, 137, 12565-12579.	6.6	89
20	Alkoxyâ€Functionalized Thienylâ€Vinylene Polymers for Fieldâ€Effect Transistors and Allâ€Polymer Solar Cells. Advanced Functional Materials, 2014, 24, 2782-2793.	7.8	83
21	Thiopheneâ€“Diazine Molecular Semiconductors: Synthesis, Structural, Electrochemical, Optical, and Electronic Structural Properties; Implementation in Organic Fieldâ€Effect Transistors. Chemistry - A European Journal, 2009, 15, 5023-5039.	1.7	82
22	Versatile Î±,Ï‰â€Disubstituted Tetrathienoacene Semiconductors for High Performance Organic Thinâ€Film Transistors. Advanced Functional Materials, 2012, 22, 48-60.	7.8	82
23	Ladderâ€type Heteroarenes: Up to 15 Rings with Five Imide Groups. Angewandte Chemie, 2017, 129, 10056-10061.	1.6	81
24	Quinoidal Oligothiophenes: Towards Biradical Groundâ€State Species. Chemistry - A European Journal, 2010, 16, 470-484.	1.7	74
25	Distannylated Bithiophene Imide: Enabling Highâ€Performance nâ€Type Polymer Semiconductors with an Acceptorâ€“Acceptor Backbone. Angewandte Chemie - International Edition, 2020, 59, 14449-14457.	7.2	72
26	Ambipolar Organic Fieldâ€Effect Transistors from Crossâ€Conjugated Aromatic Quaterthiophenes; Comparisons with Quinoidal Parent Materials. Advanced Functional Materials, 2009, 19, 386-394.	7.8	71
27	Rational Design of Ambipolar Organic Semiconductors: Is Core Planarity Central to Ambipolarity in Thiopheneâ€“Naphthalene Semiconductors?. Chemistry - A European Journal, 2012, 18, 532-543.	1.7	66
28	Phenacylâ€“Thiophene and Quinone Semiconductors Designed for Solution Processability and Airâ€Stability in High Mobility nâ€Channel Fieldâ€Effect Transistors. Chemistry - A European Journal, 2010, 16, 1911-1928.	1.7	60
29	Exploration of Ground and Excited Electronic States of Aromatic and QuinoidS,S-Dioxide Terthiophenes. Complementary Systems for Enhanced Electronic Organic Materials. Journal of the American Chemical Society, 2006, 128, 10134-10144.	6.6	55
30	The unusual electronic structure of ambipolar dicyanovinyl-substituted diketopyrrolopyrrole derivatives. Journal of Materials Chemistry C, 2014, 2, 6376.	2.7	55
31	Electronic Modulation of Dithienothiophene (DTT) as Ï€-Center of D-Ï€-D Chromophores on Optical and Redox Properties:Â Analysis by UVâ^'Visâ^'NIR and Raman Spectroscopies Combined with Electrochemistry and Quantum Chemical DFT Calculations. Journal of the American Chemical Society, 2004, 126, 13363-13376.	6.6	52
32	New Semiconductors Based on 2,2â€²-Ethyne-1,2-diylbis[3-(alk-1-yn-1-yl)thiophene] for Organic Opto-Electronics. Chemistry of Materials, 2012, 24, 2929-2942.	3.2	50
33	Alternated Quinoid/Aromatic Units in Terthiophenes Building Blocks for Electroactive Narrow Band Gap Polymers. Extended Spectroscopic, Solid State, Electrochemical, and Theoretical Study. Journal of Physical Chemistry B, 2005, 109, 16616-16627.	1.2	48
34	Molecularâ€Shapeâ€Controlled Photovoltaic Performance Probed via Soluble Ï€â€Conjugated Arylacetylenic Semiconductors. Advanced Materials, 2011, 23, 3827-3831.	11.1	46
35	Novel Semiconductors Based on Functionalized Benzo[d,dâ€²]thieno[3,2-b;4,5-bâ€²]dithiophenes and the Effects of Thin Film Growth Conditions on Organic Field Effect Transistor Performance. Chemistry of Materials, 2010, 22, 5031-5041.	3.2	45
36	Vibrational and Quantum-Chemical Study of Nonlinear Optical Chromophores Containing Dithienothiophene as the Electron Relay. Chemistry - A European Journal, 2004, 10, 3805-3816.	1.7	44

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37	Magnetic Properties of Quinoidal Oligothiophenes: More Than Good Candidates for Ambipolar Organic Semiconductors?. Advanced Functional Materials, 2006, 16, 531-536.	7.8	42
38	Novel Thiopheneâ€“Phenyleneâ€“Thiophene Fused Bislactam-Based Donorâ€“Acceptor Type Conjugate Polymers: Synthesis by Direct Arylation and Properties. Macromolecules, 2013, 46, 9220-9230.	2.2	41
39	Multidisciplinary Physicochemical Analysis of Oligothiophenes End-Capped by Nitriles:Â Electrochemistry, UVâ^'Visâ^'Near-IR, IR, and Raman Spectroscopies and Quantum Chemistry. Journal of Physical Chemistry B, 2005, 109, 10115-10125.	1.2	40
40	Very Large Silacylic Substituent Effects on Response in Silole-Based Polymer Transistors. Chemistry of Materials, 2011, 23, 2185-2200.	3.2	38
41	Isomeric carbazolocarbazoles: synthesis, characterization and comparative study in Organic Field Effect Transistors. Journal of Materials Chemistry C, 2013, 1, 1959.	2.7	38
42	Molecular and Electronicâ€Structure Basis of the Ambipolar Behavior of Naphthalimideâ€“Terthiophene Derivatives: Implementation in Organic Fieldâ€Effect Transistors. Chemistry - A European Journal, 2013, 19, 12458-12467.	1.7	37
43	Raman Spectroscopy Shows Interchain through Space Charge Delocalization in a Mixed Valence Oligothiophene Cation and in Its Ï€-Dimeric Biradicaloid Dication. Journal of the American Chemical Society, 2008, 130, 14028-14029.	6.6	36
44	Azine- and Azole-Functionalized OligoÂ´ and Polythiophene Semiconductors for Organic Thin-Film Transistors. Materials, 2010, 3, 1533-1558.	1.3	34
45	Mobility versus Alignment of a Semiconducting Ï€-Extended Discotic Liquid-Crystalline Triindole. ACS Applied Materials & Interfaces, 2016, 8, 26964-26971.	4.0	34
46	Synthesis of Perylene Imide Diones as Platforms for the Development of Pyrazine Based Organic Semiconductors. Journal of Organic Chemistry, 2016, 81, 11256-11267.	1.7	34
47	New Multiresponsive Chromic Soft Materials: Dynamic Interconversion of Short 2,7â€Dicyanomethylenecarbazoleâ€Based Biradicaloid and the Corresponding Cyclophane Tetramer. Chemistry - A European Journal, 2017, 23, 13776-13783.	1.7	33
48	Magnetic and Conductive Properties of Quinoidal Oligothiophenes. Chemistry of Materials, 2006, 18, 1539-1545.	3.2	32
49	Thiophene- and Selenophene-Based Heteroacenes:â€‰ Combined Quantum Chemical DFT and Spectroscopic Raman and UVâ^'Visâ^'NIR Study. Journal of Physical Chemistry B, 2007, 111, 7488-7496.	1.2	32
50	Phenyl- and Thienyl-Ended Symmetric Azomethines and Azines as Model Compounds for n-Channel Organic Field-Effect Transistors: An Electrochemical and Computational Study. Journal of Physical Chemistry C, 2014, 118, 3984-3993.	1.5	30
51	Incisive Structureâ^'Spectroscopic Correlation in Oligothiophenes Functionalized with (Â±) Inductive/Mesomeric Fluorine Groups:Â Joint Raman and DFT Study. Journal of the American Chemical Society, 2005, 127, 13364-13372.	6.6	29
52	Application of Raman spectroscopy and quantum chemistry for featuring the structure of positively charged species in macrocyclicÏ€-conjugated diacetylene-bridged oligothiophenes. Journal of Raman Spectroscopy, 2004, 35, 592-599.	1.2	25
53	Hybrid Organic Semiconductors Including Chalcogen Atoms in Ï€-Conjugated Skeletons. Tuning of Optical, Redox, and Vibrational Properties by Heavy Atom Conjugation. Journal of Physical Chemistry A, 2006, 110, 7422-7430.	1.1	25
54	Distannylated Bithiophene Imide: Enabling Highâ€Performance nâ€Type Polymer Semiconductors with an Acceptorâ€“Acceptor Backbone. Angewandte Chemie, 2020, 132, 14557-14565.	1.6	25

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55	Alkoxy functionalized benzothiadiazole based donorâ€“acceptor conjugated copolymers for organic field-effect transistors. Journal of Materials Chemistry C, 2021, 9, 5113-5123.	2.7	22
56	Synthesis and Characterization of a Novel Terthiophene-Based Quinodimethane Bearing a 3,4-Ethylenedioxythiophene Central Unit. Journal of Physical Chemistry B, 2005, 109, 22308-22318.	1.2	18
57	Synthesis and Characterization of Three Novel Perfluoro-oligothiophenes Ranging in Length from the Trimer to the Pentamer. Journal of Physical Chemistry B, 2005, 109, 20737-20745.	1.2	16
58	Solution-processedN-trialkylated triindoles for organic field effect transistors. Journal of Materials Chemistry C, 2018, 6, 50-56.	2.7	16
59	Processable High Electron Mobility Ï€â€Copolymers via Mesoscale Backbone Conformational Ordering. Advanced Functional Materials, 2021, 31, 2009359.	7.8	16
60	Studies of Photogenerated Charge Carriers from Donorâ^'Acceptor Interfaces in Organic Field Effect Transistors. Implications for Organic Solar Cells. Journal of Physical Chemistry C, 2010, 114, 20609-20613.	1.5	15
61	Effective interplay of donor and acceptor groups for tuning optoelectronic properties in oligothiopheneâ€“naphthalimide assemblies. Journal of Materials Chemistry C, 2020, 8, 15277-15289.	2.7	15
62	Helically Annelated and Cross-Conjugated Î²-Oligothiophenes:Â A Fourier Transform Raman Spectroscopic and Quantum Chemical Density Functional Theory Study. Journal of Physical Chemistry C, 2007, 111, 4854-4860.	1.5	14
63	Benzotrithiophene versus Benzo/Naphthodithiophene Building Blocks: The Effect of Starâ€Shaped versus Linear Conjugation on Their Electronic Structures. Chemistry - A European Journal, 2016, 22, 6374-6381.	1.7	14
64	All-Polymer Solar Cells Incorporating Readily Accessible Naphthalene Diimide and Isoindigo Acceptor Polymers for Improved Light Harvesting. Chemistry of Materials, 2022, 34, 3267-3279.	3.2	14
65	Robust Ethylenedioxythiopheneâ€“Vinylene Oligomers from Fragile Thiopheneâ€“Vinylene Cores: Synthesis and Optical, Chemical and Electrochemical Properties of Multicharged Shapes. Chemistry - A European Journal, 2015, 21, 1713-1725.	1.7	13
66	Dâ€“Aâ€“D 2H-benzo[d][1,2,3]triazole derivatives as p-type semiconductors in organic field-effect transistors. RSC Advances, 2018, 8, 21879-21888.	1.7	13
67	Tuning of the Electronic Levels of Oligothiopheneâ€“Naphthalimide Assemblies by Chemical Modification. Chemistry - A European Journal, 2016, 22, 13643-13652.	1.7	12
68	Synthesis of D-Ï€-A high-emissive 6-arylalkynyl-1,8-naphthalimides for application in Organic Field-Effect Transistors and optical waveguides. Dyes and Pigments, 2021, 191, 109358.	2.0	12
69	Backbone Configuration and Electronic Property Tuning of Imideâ€Functionalized Ladderâ€Type Heteroarenesâ€Based Polymer Acceptors for Efficient Allâ€Polymer Solar Cells. Advanced Functional Materials, 2022, 32, .	7.8	12
70	Microwave Irradiation as a Powerful Tool for the Preparation of n-Type Benzotriazole Semiconductors with Applications in Organic Field-Effect Transistors. Molecules, 2022, 27, 4340.	1.7	10
71	Molecular aggregation of naphthalimide organic semiconductors assisted by amphiphilic and lipophilic interactions: a joint theoretical and experimental study. Physical Chemistry Chemical Physics, 2017, 19, 6206-6215.	1.3	9
72	Carbonylâ€Functionalized Quaterthiophenes: A Study of the Vibrational Raman and Electronic Absorption/Emission Properties Guided by Theoretical Calculations. ChemPhysChem, 2012, 13, 168-176.	1.0	8

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73	Stereoisomers of an azine-linked donorâ€“acceptor conjugated polymer: the impact of molecular conformation on electrical performance. RSC Advances, 2016, 6, 44272-44278.	1.7	8
74	Even and odd oligothiophene-bridged bis-naphthalimides for n-type and ambipolar organic field effect transistors. Journal of Materials Chemistry C, 2017, 5, 9439-9450.	2.7	8
75	Spectroscopic and DFT studies of donor-acceptor molecules containing phenylquinoline and phenothiazine moieties in various redox states. International Journal of Quantum Chemistry, 2005, 104, 635-644.	1.0	7
76	Comparing the microstructure and photovoltaic performance of 3 perylene imide acceptors with similar energy levels but different packing tendencies. Journal of Materials Chemistry C, 2022, 10, 1698-1710.	2.7	7
77	A Practical Spectroscopic and Theoretical Approach To Study the Electrochromism in Molecular-Based Materials:â€‰ The Case of a Family of Dendrimerlike Poly(6-azulenylethenyl)benzenes. Journal of Physical Chemistry B, 2004, 108, 18463-18471.	1.2	6
78	FT-Raman spectroscopic study, aided by quantum chemical DFT calculations, of a series of oligothiophenes end-capped by nitriles. Journal of Molecular Structure, 2005, 744-747, 403-409.	1.8	6
79	Fourier Transform Raman and DFT Study of Three Annulated Oligothiophenes with Different Molecular Shapes. ChemPhysChem, 2007, 8, 745-750.	1.0	6
80	Electronic Studies on Oligothienylenevinylenes: Understanding the Nature of Their Ground and Excited Electronic States. ChemPhysChem, 2009, 10, 1901-1910.	1.0	6
81	Perfluoroarene units in distyryl-oligothiophene analogues: An efficient electron density confinement preventing n-type transport in organic thin film transistors. Synthetic Metals, 2012, 162, 857-861.	2.1	6
82	Sonochemical Synthesis of Optically Tuneable Conjugated Polymer Nanoparticles. Particle and Particle Systems Characterization, 2018, 35, 1700322.	1.2	6
83	Ladder-type bithiophene imide-based organic semiconductors: understanding charge transport mechanisms in organic field effect transistors. Journal of Materials Chemistry C, 2020, 8, 15759-15770.	2.7	6
84	Fluorene-Based Donor-Acceptor Copolymers Containing Functionalized Benzotriazole Units: Tunable Emission and their Electrical Properties. Polymers, 2020, 12, 256.	2.0	6
85	V-shaped pyranylidene/triphenylamine-based chromophores with enhanced photophysical, electrochemical and nonlinear optical properties. Materials Advances, 2021, 2, 4255-4263.	2.6	6
86	Combined theoretical and spectroscopic Raman study of 3,4-ethylenedioxy and S,S-dioxide substituted terthiophenes and their parent polymers. Journal of Molecular Structure, 2005, 744-747, 551-556.	1.8	5
87	Pushâ^'Pull Bithienyl Chromophore with an Unusual Transverse Path of Conjugation. Journal of Physical Chemistry A, 2007, 111, 841-851.	1.1	5
88	Toward n-channel organic thin film transistors based on a distyryl-bithiophene derivatives. Tetrahedron, 2012, 68, 4664-4671.	1.0	5
89	Extending Hexaazatriphenylene with Mono-/Bithiophenes in Acceptorâ€“Donor Diads and Acceptorâ€“Donorâ€“Acceptor Triads. Journal of Physical Chemistry C, 2016, 120, 23276-23285.	1.5	5
90	Synthesis and electronic properties of nitrogen-doped Ï€-extended polycyclic aromatic dicarboximides with multiple redox processes. Journal of Materials Chemistry C, 0, , .	2.7	5

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91	Synthesis and electronic properties of pyridine end-capped cyclopentadithiophene-vinylene oligomers. RSC Advances, 2020, 10, 41264-41271.	1.7	4
92	Oligothiophene-Naphthalimide Hybrids Connected through Rigid and Conjugated Linkers in Organic Electronics: An Overview. Electronic Materials, 2021, 2, 222-252.	0.9	4
93	Perfluorination of tetracene: effects on the optical gap and electron-acceptor properties. An electrochemical, theoretical DFT, and Raman spectroscopic study. , 2006, , .		3
94	Functionalized Crystalline N-Trimethyltriindoles: Counterintuitive Influence of Peripheral Substituents on Their Semiconducting Properties. Molecules, 2022, 27, 1121.	1.7	2
95	Vibrational and Quantum-Chemical Study of Nonlinear Optical Chromophores Containing Dithienothiophene as the Electron Relay. Chemistry - A European Journal, 2004, 10, 3848-3848.	1.7	0
96	Novel semiconductors based on functionalized benzo[d,d']thieno[3,2- b ;4,5- b']dithiophenes (BTDTs) and the effects of thin film growth conditions on organic field effect transistor performance. Proceedings of SPIE, 2010, , .	0.8	0
97	Naphthodithiophene-Diketopyrrolopyrrole Small Molecule Donors for Efficient Solution-Processed Solar Cells. Materials Research Society Symposia Proceedings, 2012, 1390, 34.	0.1	0
98	Polymer Solar Cells: Bithiophene Imide and Benzodithiophene Copolymers for Efficient Inverted Polymer Solar Cells (Adv. Mater. 17/2012). Advanced Materials, 2012, 24, 2362-2362.	11.1	0
99	RÃ¼cktitelbild: Ladderâ€type Heteroarenes: Up to 15 Rings with Five Imide Groups (Angew. Chem. 33/2017). Angewandte Chemie, 2017, 129, 10132-10132.	1.6	0
100	Tobin Marksâ€™ 75th birthday. A celebration of a career devoted to materials chemistry. Journal of Materials Chemistry C, 2020, 8, 14979-14982.	2.7	0