

Roco Ponce Ortiz

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96
papers

6,047
citations

38
h-index

77
g-index

105
ext. papers

6,571
ext. citations

9.7
avg, IF

5.45
L-index

#	Paper	IF	Citations
96	Polymer solar cells with enhanced fill factors. <i>Nature Photonics</i> , 2013 , 7, 825-833	33.9	806
95	High-k organic, inorganic, and hybrid dielectrics for low-voltage organic field-effect transistors. <i>Chemical Reviews</i> , 2010 , 110, 205-39	68.1	718
94	A naphthodithiophene-diketopyrrolopyrrole donor molecule for efficient solution-processed solar cells. <i>Journal of the American Chemical Society</i> , 2011 , 133, 8142-5	16.4	460
93	Bithiopheneimide-dithienosilole/dithienogermole copolymers for efficient solar cells: information from structure-property-device performance correlations and comparison to thieno[3,4-c]pyrrole-4,6-dione analogues. <i>Journal of the American Chemical Society</i> , 2012 , 134, 18427-39	16.4	239
92	Diindeno-fusion of an anthracene as a design strategy for stable organic biradicals. <i>Nature Chemistry</i> , 2016 , 8, 753-9	17.6	217
91	Thieno[3,4-c]pyrrole-4,6-dione-based polymer semiconductors: toward high-performance, air-stable organic thin-film transistors. <i>Journal of the American Chemical Society</i> , 2011 , 133, 13685-97	16.4	213
90	Bithiophene-imide-based polymeric semiconductors for field-effect transistors: synthesis, structure-property correlations, charge carrier polarity, and device stability. <i>Journal of the American Chemical Society</i> , 2011 , 133, 1405-18	16.4	206
89	Quinoidal oligothiophenes: new properties behind an unconventional electronic structure. <i>Chemical Society Reviews</i> , 2012 , 41, 5672-86	58.5	204
88	Combining electron-neutral building blocks with intramolecular "conformational locks" affords stable, high-mobility p- and n-channel polymer semiconductors. <i>Journal of the American Chemical Society</i> , 2012 , 134, 10966-73	16.4	174
87	Dialkoxybithiazole: a new building block for head-to-head polymer semiconductors. <i>Journal of the American Chemical Society</i> , 2013 , 135, 1986-96	16.4	164
86	Bithiophene imide and benzodithiophene copolymers for efficient inverted polymer solar cells. <i>Advanced Materials</i> , 2012 , 24, 2242-8	24	142
85	On the biradicaloid nature of long quinoidal oligothiophenes: experimental evidence guided by theoretical studies. <i>Angewandte Chemie - International Edition</i> , 2007 , 46, 9057-61	16.4	139
84	Fundamental performance limits of carbon nanotube thin-film transistors achieved using hybrid molecular dielectrics. <i>ACS Nano</i> , 2012 , 6, 7480-8	16.7	129
83	Organic n-channel field-effect transistors based on arylenediimide-thiophene derivatives. <i>Journal of the American Chemical Society</i> , 2010 , 132, 8440-52	16.4	125
82	(Semi)ladder-Type Bithiophene Imide-Based All-Acceptor Semiconductors: Synthesis, Structure-Property Correlations, and Unipolar n-Type Transistor Performance. <i>Journal of the American Chemical Society</i> , 2018 , 140, 6095-6108	16.4	123
81	Closely packed, low reorganization energy extended postfullerene acceptors for efficient polymer solar cells. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, E8341-E8348	11.5	85
80	Marked Consequences of Systematic Oligothiophene Catenation in Thieno[3,4-c]pyrrole-4,6-dione and Bithiopheneimide Photovoltaic Copolymers. <i>Journal of the American Chemical Society</i> , 2015 , 137, 12565-79	16.4	80

79	Ladder-type Heteroarenes: Up to 15 Rings with Five Imide Groups. <i>Angewandte Chemie - International Edition</i> , 2017 , 56, 9924-9929	16.4	79
78	Alkoxy-Functionalized Thienyl-Vinylene Polymers for Field-Effect Transistors and All-Polymer Solar Cells. <i>Advanced Functional Materials</i> , 2014 , 24, 2782-2793	15.6	76
77	Thiophene-diazine molecular semiconductors: synthesis, structural, electrochemical, optical, and electronic structural properties; implementation in organic field-effect transistors. <i>Chemistry - A European Journal</i> , 2009 , 15, 5023-39	4.8	76
76	Versatile π -Disubstituted Tetrathienoacene Semiconductors for High Performance Organic Thin-Film Transistors. <i>Advanced Functional Materials</i> , 2012 , 22, 48-60	15.6	71
75	Ambipolar Organic Field-Effect Transistors from Cross-Conjugated Aromatic Quaterthiophenes; Comparisons with Quinoidal Parent Materials. <i>Advanced Functional Materials</i> , 2009 , 19, 386-394	15.6	63
74	Quinoidal oligothiophenes: towards biradical ground-state species. <i>Chemistry - A European Journal</i> , 2010 , 16, 470-84	4.8	63
73	Rational design of ambipolar organic semiconductors: is core planarity central to ambipolarity in thiophene-naphthalene semiconductors?. <i>Chemistry - A European Journal</i> , 2012 , 18, 532-43	4.8	62
72	Phenacyl-thiophene and quinone semiconductors designed for solution processability and air-stability in high mobility n-channel field-effect transistors. <i>Chemistry - A European Journal</i> , 2010 , 16, 1911-28	4.8	57
71	Exploration of ground and excited electronic states of aromatic and quinoid S,S-dioxide terthiophenes. Complementary systems for enhanced electronic organic materials. <i>Journal of the American Chemical Society</i> , 2006 , 128, 10134-44	16.4	53
70	The unusual electronic structure of ambipolar dicyanovinyl-substituted diketopyrrolopyrrole derivatives. <i>Journal of Materials Chemistry C</i> , 2014 , 2, 6376	7.1	49
69	Electronic modulation of dithienothiophene (DTT) as pi-center of D-pi-D chromophores on optical and redox properties: analysis by UV-Vis-NIR and Raman spectroscopies combined with electrochemistry and quantum chemical DFT calculations. <i>Journal of the American Chemical Society</i> , 2004 , 126, 13363-76	16.4	48
68	New Semiconductors Based on 2,2'-Ethyne-1,2-diylbis[3-(alk-1-yn-1-yl)thiophene] for Organic Opto-Electronics. <i>Chemistry of Materials</i> , 2012 , 24, 2929-2942	9.6	46
67	On the Biradicaloid Nature of Long Quinoidal Oligothiophenes: Experimental Evidence Guided by Theoretical Studies. <i>Angewandte Chemie</i> , 2007 , 119, 9215-9219	3.6	46
66	Novel Semiconductors Based on Functionalized Benzo[d,d']thieno[3,2-b;4,5-b']dithiophenes and the Effects of Thin Film Growth Conditions on Organic Field Effect Transistor Performance. <i>Chemistry of Materials</i> , 2010 , 22, 5031-5041	9.6	43
65	Vibrational and quantum-chemical study of nonlinear optical chromophores containing dithienothiophene as the electron relay. <i>Chemistry - A European Journal</i> , 2004 , 10, 3805-16	4.8	43
64	Stable Organic Diradicals Based on Fused Quinoidal Oligothiophene Imides with High Electrical Conductivity. <i>Journal of the American Chemical Society</i> , 2020 , 142, 4329-4340	16.4	42
63	Molecular-shape-controlled photovoltaic performance probed via soluble π -conjugated arylacetylenic semiconductors. <i>Advanced Materials</i> , 2011 , 23, 3827-31	24	41
62	Magnetic Properties of Quinoidal Oligothiophenes: More Than Good Candidates for Ambipolar Organic Semiconductors?. <i>Advanced Functional Materials</i> , 2006 , 16, 531-536	15.6	41

61	Alternated quinoid/aromatic units in terthiophenes building blocks for electroactive narrow band gap polymers. Extended spectroscopic, solid state, electrochemical, and theoretical study. <i>Journal of Physical Chemistry B</i> , 2005 , 109, 16616-27	3.4	41
60	Novel Thiophene-Phenylene-Thiophene Fused Bislactam-Based Donor-Acceptor Type Conjugate Polymers: Synthesis by Direct Arylation and Properties. <i>Macromolecules</i> , 2013 , 46, 9220-9230	5.5	40
59	Multidisciplinary physicochemical analysis of oligothiophenes end-capped by nitriles: electrochemistry, UV-vis-near-IR, IR, and Raman spectroscopies and quantum chemistry. <i>Journal of Physical Chemistry B</i> , 2005 , 109, 10115-25	3.4	40
58	Very Large Silacyclic Substituent Effects on Response in Silole-Based Polymer Transistors. <i>Chemistry of Materials</i> , 2011 , 23, 2185-2200	9.6	36
57	Distannylated Bithiophene Imide: Enabling High-Performance n-Type Polymer Semiconductors with an Acceptor-Acceptor Backbone. <i>Angewandte Chemie - International Edition</i> , 2020 , 59, 14449-14457	16.4	34
56	Raman spectroscopy shows interchain through space charge delocalization in a mixed valence oligothiophene cation and in its pi-dimeric biradicaloid dication. <i>Journal of the American Chemical Society</i> , 2008 , 130, 14028-9	16.4	34
55	Isomeric carbazolocarbazoles: synthesis, characterization and comparative study in Organic Field Effect Transistors. <i>Journal of Materials Chemistry C</i> , 2013 , 1, 1959	7.1	32
54	Azine- and Azole-Functionalized Oligo- and Polythiophene Semiconductors for Organic Thin-Film Transistors. <i>Materials</i> , 2010 , 3, 1533-1558	3.5	32
53	Magnetic and Conductive Properties of Quinoidal Oligothiophenes. <i>Chemistry of Materials</i> , 2006 , 18, 1539-1545	9.6	32
52	Thiophene- and selenophene-based heteroacenes: combined quantum chemical DFT and spectroscopic Raman and UV-Vis-NIR study. <i>Journal of Physical Chemistry B</i> , 2007 , 111, 7488-96	3.4	31
51	Molecular and electronic-structure basis of the ambipolar behavior of naphthalimide-terthiophene derivatives: implementation in organic field-effect transistors. <i>Chemistry - A European Journal</i> , 2013 , 19, 12458-67	4.8	30
50	Ladder-type Heteroarenes: Up to 15 Rings with Five Imide Groups. <i>Angewandte Chemie</i> , 2017 , 129, 10056-10061	6.1	28
49	Incisive structure-spectroscopic correlation in oligothiophenes functionalized with (+/-) inductive/mesomeric fluorine groups: joint Raman and DFT study. <i>Journal of the American Chemical Society</i> , 2005 , 127, 13364-72	16.4	28
48	Phenyl- and Thienyl-Ended Symmetric Azomethines and Azines as Model Compounds for n-Channel Organic Field-Effect Transistors: An Electrochemical and Computational Study. <i>Journal of Physical Chemistry C</i> , 2014 , 118, 3984-3993	3.8	26
47	Synthesis of Perylene Imide Diones as Platforms for the Development of Pyrazine Based Organic Semiconductors. <i>Journal of Organic Chemistry</i> , 2016 , 81, 11256-11267	4.2	25
46	Application of Raman spectroscopy and quantum chemistry for featuring the structure of positively charged species in macrocyclic π -conjugated diacetylene-bridged oligothiophenes. <i>Journal of Raman Spectroscopy</i> , 2004 , 35, 592-599	2.3	25
45	Mobility versus Alignment of a Semiconducting π -Extended Discotic Liquid-Crystalline Triindole. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 26964-26971	9.5	25
44	New Multiresponsive Chromic Soft Materials: Dynamic Interconversion of Short 2,7-Dicyanomethylenecarbazole-Based Biradicaloid and the Corresponding Cyclophane Tetramer. <i>Chemistry - A European Journal</i> , 2017 , 23, 13776-13783	4.8	23

43	Hybrid organic semiconductors including chalcogen atoms in pi-conjugated skeletons. Tuning of optical, redox, and vibrational properties by heavy atom conjugation. <i>Journal of Physical Chemistry A</i> , 2006 , 110, 7422-30	2.8	23
42	Synthesis and characterization of a novel terthiophene-based quinodimethane bearing a 3,4-ethylenedioxythiophene central unit. <i>Journal of Physical Chemistry B</i> , 2005 , 109, 22308-18	3.4	17
41	Synthesis and characterization of three novel perfluoro-oligothiophenes ranging in length from the trimer to the pentamer. <i>Journal of Physical Chemistry B</i> , 2005 , 109, 20737-45	3.4	16
40	Studies of Photogenerated Charge Carriers From Donor-Acceptor Interfaces in Organic Field Effect Transistors. Implications for Organic Solar Cells <i>Journal of Physical Chemistry C</i> , 2010 , 114, 20609-20613	3.8	14
39	Distannylated Bithiophene Imide: Enabling High-Performance n-Type Polymer Semiconductors with an Acceptor-Acceptor Backbone. <i>Angewandte Chemie</i> , 2020 , 132, 14557-14565	3.6	13
38	Helically Annelated and Cross-Conjugated Oligothiophenes: A Fourier Transform Raman Spectroscopic and Quantum Chemical Density Functional Theory Study. <i>Journal of Physical Chemistry C</i> , 2007 , 111, 4854-4860	3.8	13
37	Benzotrithiophene versus Benzo/Naphthodithiophene Building Blocks: The Effect of Star-Shaped versus Linear Conjugation on Their Electronic Structures. <i>Chemistry - A European Journal</i> , 2016 , 22, 6374-81	4.8	12
36	Solution-processed N-trialkylated triindoles for organic field effect transistors. <i>Journal of Materials Chemistry C</i> , 2018 , 6, 50-56	7.1	11
35	Tuning of the Electronic Levels of Oligothiophene-Naphthalimide Assemblies by Chemical Modification. <i>Chemistry - A European Journal</i> , 2016 , 22, 13643-52	4.8	9
34	Robust ethylenedioxythiophene-vinylene oligomers from fragile thiophene-vinylene cores: synthesis and optical, chemical and electrochemical properties of multicharged shapes. <i>Chemistry - A European Journal</i> , 2015 , 21, 1713-25	4.8	9
33	D-A-D 2-benzotriazole derivatives as p-type semiconductors in organic field-effect transistors. <i>RSC Advances</i> , 2018 , 8, 21879-21888	3.7	8
32	Carbonyl-functionalized quaterthiophenes: a study of the vibrational Raman and electronic absorption/emission properties guided by theoretical calculations. <i>ChemPhysChem</i> , 2012 , 13, 168-76	3.2	8
31	Molecular aggregation of naphthalimide organic semiconductors assisted by amphiphilic and lipophilic interactions: a joint theoretical and experimental study. <i>Physical Chemistry Chemical Physics</i> , 2017 , 19, 6206-6215	3.6	7
30	Electronic studies on oligothiophenevinylenes: understanding the nature of their ground and excited electronic states. <i>ChemPhysChem</i> , 2009 , 10, 1901-10	3.2	6
29	Fourier transform Raman and DFT study of three annulated oligothiophenes with different molecular shapes. <i>ChemPhysChem</i> , 2007 , 8, 745-50	3.2	6
28	A Practical Spectroscopic and Theoretical Approach To Study the Electrochromism in Molecular-Based Materials: The Case of a Family of Dendrimerlike Poly(6-azulenylethenyl)benzenes. <i>Journal of Physical Chemistry B</i> , 2004 , 108, 18463-18471	3.4	6
27	FT-Raman spectroscopic study, aided by quantum chemical DFT calculations, of a series of oligothiophenes end-capped by nitriles. <i>Journal of Molecular Structure</i> , 2005 , 744-747, 403-409	3.4	6
26	Spectroscopic and DFT studies of donor-acceptor molecules containing phenylquinoline and phenothiazine moieties in various redox states. <i>International Journal of Quantum Chemistry</i> , 2005 , 104, 635-644	2.1	6

25	Sonochemical Synthesis of Optically Tuneable Conjugated Polymer Nanoparticles. <i>Particle and Particle Systems Characterization</i> , 2018 , 35, 1700322	3.1	5
24	Toward n-channel organic thin film transistors based on a distyryl-bithiophene derivatives. <i>Tetrahedron</i> , 2012 , 68, 4664-4671	2.4	5
23	Even and odd oligothiophene-bridged bis-naphthalimides for n-type and ambipolar organic field effect transistors. <i>Journal of Materials Chemistry C</i> , 2017 , 5, 9439-9450	7.1	5
22	Perfluoroarene units in distyryl-oligothiophene analogues: An efficient electron density confinement preventing n-type transport in organic thin film transistors. <i>Synthetic Metals</i> , 2012 , 162, 857-861	3.6	5
21	Push-pull bithienyl chromophore with an unusual transverse path of conjugation. <i>Journal of Physical Chemistry A</i> , 2007 , 111, 841-51	2.8	5
20	Effective interplay of donor and acceptor groups for tuning optoelectronic properties in oligothiophene-naphthalimide assemblies. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 15277-15289	7.1	5
19	Stereoisomers of an azine-linked donor-acceptor conjugated polymer: the impact of molecular conformation on electrical performance. <i>RSC Advances</i> , 2016 , 6, 44272-44278	3.7	5
18	Extending Hexaazatriphenylene with Mono-/Bithiophenes in Acceptor-Donor Diads and Acceptor-Donor-Acceptor Triads. <i>Journal of Physical Chemistry C</i> , 2016 , 120, 23276-23285	3.8	5
17	Alkoxy functionalized benzothiadiazole based donor-acceptor conjugated copolymers for organic field-effect transistors. <i>Journal of Materials Chemistry C</i> , 2021 , 9, 5113-5123	7.1	5
16	Fluorene-Based Donor-Acceptor Copolymers Containing Functionalized Benzotriazole Units: Tunable Emission and their Electrical Properties. <i>Polymers</i> , 2020 , 12,	4.5	4
15	Combined theoretical and spectroscopic Raman study of 3,4-ethylenedioxy and S,S-dioxide substituted terthiophenes and their parent polymers. <i>Journal of Molecular Structure</i> , 2005 , 744-747, 551-556	3.4	4
14	Processable High Electron Mobility Copolymers via Mesoscale Backbone Conformational Ordering. <i>Advanced Functional Materials</i> , 2021 , 31, 2009359	15.6	4
13	Perfluorination of tetracene: effects on the optical gap and electron-acceptor properties. An electrochemical, theoretical DFT, and Raman spectroscopic study 2006 ,		3
12	Ladder-type bithiophene imide-based organic semiconductors: understanding charge transport mechanisms in organic field effect transistors. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 15759-15770	7.1	3
11	Synthesis of D-BA high-emissive 6-arylalkynyl-1,8-naphthalimides for application in Organic Field-Effect Transistors and optical waveguides. <i>Dyes and Pigments</i> , 2021 , 191, 109358	4.6	2
10	Comparing the microstructure and photovoltaic performance of 3 perylene imide acceptors with similar energy levels but different packing tendencies. <i>Journal of Materials Chemistry C</i> , 2022 , 10, 1698-1710	7.1	1
9	Synthesis and electronic properties of pyridine end-capped cyclopentadithiophene-vinylene oligomers.. <i>RSC Advances</i> , 2020 , 10, 41264-41271	3.7	1
8	V-shaped pyranilidene/triphenylamine-based chromophores with enhanced photophysical, electrochemical and nonlinear optical properties. <i>Materials Advances</i> , 2021 , 2, 4255-4263	3.3	1

- 7 Backbone Configuration and Electronic Property Tuning of Imide-Functionalized Ladder-Type Heteroarenes-Based Polymer Acceptors for Efficient All-Polymer Solar Cells. *Advanced Functional Materials*, 2200065 15.6 1
- 6 Oligothiophene-Naphthalimide Hybrids Connected through Rigid and Conjugated Linkers in Organic Electronics: An Overview. *Electronic Materials*, **2021**, 2, 222-252 0.8 0
- 5 R&Ktitelbild: Ladder-type Heteroarenes: Up to 15 Rings with Five Imide Groups (Angew. Chem. 33/2017). *Angewandte Chemie*, **2017**, 129, 10132-10132 3.6
- 4 Polymer Solar Cells: Bithiophene Imide and Benzodithiophene Copolymers for Efficient Inverted Polymer Solar Cells (Adv. Mater. 17/2012). *Advanced Materials*, **2012**, 24, 2362-2362 2.4
- 3 Naphthodithiophene-Diketopyrrolopyrrole Small Molecule Donors for Efficient Solution-Processed Solar Cells. *Materials Research Society Symposia Proceedings*, **2012**, 1390, 34
- 2 Transparent Metal Oxide Nanowire Electronics **2010**, 243-263
- 1 Vibrational and Quantum-Chemical Study of Nonlinear Optical Chromophores Containing Dithienothiophene as the Electron Relay. *Chemistry - A European Journal*, **2004**, 10, 3848-3848 4.8