

Qian Miao

List of Publications by Year in descending order

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127
papers

8,761
citations

34016

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45213

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148
all docs

148
docs citations

148
times ranked

8012
citing authors

#	ARTICLE	IF	CITATIONS
1	Restriction of Intramolecular Motions: The General Mechanism behind Aggregation-Induced Emission. Chemistry - A European Journal, 2014, 20, 15349-15353.	1.7	578
2	Soluble and Stable <i>N</i> -Heteropentacenes with High Field-Effect Mobility. Advanced Materials, 2011, 23, 1535-1539.	11.1	334
3	Ten Years of <i>N</i> -Heteropentacenes as Semiconductors for Organic Thin-Film Transistors. Advanced Materials, 2014, 26, 5541-5549.	11.1	324
4	Molecular Wires from Contorted Aromatic Compounds. Angewandte Chemie - International Edition, 2005, 44, 7390-7394.	7.2	293
5	Toward Negatively Curved Carbons. Accounts of Chemical Research, 2018, 51, 1630-1642.	7.6	281
6	Curved Polycyclic Aromatic Molecules That Are π -Isoelectronic to Hexabenzocoronene. Journal of the American Chemical Society, 2012, 134, 13796-13803.	6.6	231
7	Organization of Acenes with a Cruciform Assembly Motif. Journal of the American Chemical Society, 2006, 128, 1340-1345.	6.6	214
8	The Position of Nitrogen in <i>N</i> -Heteropentacenes Matters. Advanced Materials, 2011, 23, 5514-5518.	11.1	210
9	Aromatic Saddles Containing Two Heptagons. Journal of the American Chemical Society, 2015, 137, 3910-3914.	6.6	189
10	Synthesis, Assembly, and Thin Film Transistors of Dihydrodiazapentacene: An Isostructural Motif for Pentacene. Journal of the American Chemical Society, 2003, 125, 10284-10287.	6.6	184
11	Recent Progress in Chemistry of Multiple Helicenes. Chemistry - an Asian Journal, 2018, 13, 884-894.	1.7	182
12	Electron Mobility Exceeding $10 \text{ cm}^2 \text{ V}^{-1} \text{ s}^{-1}$ and Band-Like Charge Transport in Solution-Processed <i>n</i> -Channel Organic Thin-Film Transistors. Advanced Materials, 2016, 28, 5276-5283.	11.1	173
13	Synthesis of Armchair and Chiral Carbon Nanobelts. Chem, 2019, 5, 838-847.	5.8	167
14	<i>N</i> -Heteropentacenes and <i>N</i> -Heteropentacenequinones: From Molecules to Semiconductors. Synlett, 2012, 23, 326-336.	1.0	160
15	Halogenated Tetraazapentacenes with Electron Mobility as High as $27.8 \text{ cm}^2 \text{ V}^{-1} \text{ s}^{-1}$ in Solution-Processed <i>n</i> -Channel Organic Thin-Film Transistors. Advanced Materials, 2018, 30, e1803467.	11.1	156
16	Hexathiapentacene: Structure, Molecular Packing, and Thin-Film Transistors. Journal of the American Chemical Society, 2006, 128, 15576-15577.	6.6	136
17	Attaching Organic Semiconductors to Gate Oxides: In Situ Assembly of Monolayer Field Effect Transistors. Journal of the American Chemical Society, 2004, 126, 15048-15050.	6.6	130
18	A Twisted Nanographene Consisting of 96 Carbon Atoms. Angewandte Chemie - International Edition, 2017, 56, 9003-9007.	7.2	127

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19	Stable and Efficient 3D-2D Perovskite-Perovskite Planar Heterojunction Solar Cell without Organic Hole Transport Layer. <i>Joule</i> , 2018, 2, 2706-2721.	11.7	124
20	High-Quality Large-Area Graphene from Dehydrogenated Polycyclic Aromatic Hydrocarbons. <i>Chemistry of Materials</i> , 2012, 24, 3906-3915.	3.2	119
21	Synthesis, Structures, and Properties of Heptabenz[7]circulene and Octabenz[8]circulene. <i>Journal of the American Chemical Society</i> , 2019, 141, 9680-9686.	6.6	116
22	o-Carborane functionalized pentacenes: synthesis, molecular packing and ambipolar organic thin-film transistors. <i>Chemical Communications</i> , 2015, 51, 12004-12007.	2.2	113
23	A Dipleiadiene-Embedded Aromatic Saddle Consisting of 86 Carbon Atoms. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 1581-1586.	7.2	112
24	Switching of non-helical overcrowded tetrabenzoheptafulvalene derivatives. <i>Chemical Science</i> , 2011, 2, 2029.	3.7	103
25	Self-Assembled Monolayers of Cyclohexyl-Terminated Phosphonic Acids as a General Dielectric Surface for High-Performance Organic Thin-Film Transistors. <i>Advanced Materials</i> , 2014, 26, 7190-7196.	11.1	95
26	Aggregation-induced emission: mechanistic study of the clusteroluminescence of tetrathienylethene. <i>Chemical Science</i> , 2017, 8, 2629-2639.	3.7	95
27	Photoresponsive nanoscale columnar transistors. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 691-696.	3.3	94
28	N-Type Organic Semiconductors Based on β -Deficient Pentacenequinones: Synthesis, Electronic Structures, Molecular Packing, and Thin Film Transistors. <i>Chemistry of Materials</i> , 2010, 22, 6438-6443.	3.2	93
29	Self-Assembled Monolayers of Phosphonic Acids with Enhanced Surface Energy for High-Performance Solution-Processed n-Channel Organic Thin-Film Transistors. <i>Angewandte Chemie - International Edition</i> , 2013, 52, 6222-6227.	7.2	89
30	Aggregation-induced emission and aggregation-promoted photochromism of bis(diphenylmethylene)dihydroacenes. <i>Chemical Science</i> , 2015, 6, 3538-3543.	3.7	86
31	Monolayer Field-Effect Transistors of Nonplanar Organic Semiconductors with Brickwork Arrangement. <i>Advanced Materials</i> , 2015, 27, 3418-3423.	11.1	85
32	Chemical Complementarity in the Contacts for Nanoscale Organic Field-Effect Transistors. <i>Journal of the American Chemical Society</i> , 2006, 128, 1788-1789.	6.6	80
33	N-heteroquinones: quadruple weak hydrogen bonds and n-channel transistors. <i>Chemical Communications</i> , 2010, 46, 2977.	2.2	76
34	Copolymer dielectrics with balanced chain-packing density and surface polarity for high-performance flexible organic electronics. <i>Nature Communications</i> , 2018, 9, 2339.	5.8	76
35	Twisted Polycyclic Arenes from Tetranaphthylidiphenylbenzenes by Controlling the Scholl Reaction with Substituents. <i>Chemistry - A European Journal</i> , 2016, 22, 18620-18627.	1.7	73
36	Benzenoid and Quinonoid Nitrogen-Containing Heteropentacenes. <i>Chemistry - A European Journal</i> , 2009, 15, 3965-3969.	1.7	70

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37	Heptagon-Embedded Pentacene: Synthesis, Structures, and Thin-Film Transistors of Dibenzo[<i>d,h</i>]benzo[1,2 <i>a</i> :4,5 <i>a'</i>]dicycloheptenes. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 6786-6790.	7.2	70
38	Performance and Stability Improvement of P3HT:PCBM-Based Solar Cells by Thermally Evaporated Chromium Oxide (CrO _x) Interfacial Layer. <i>ACS Applied Materials & Interfaces</i> , 2010, 2, 2699-2702.	4.0	68
39	Induced Crystallization of Rubrene in Thin-Film Transistors. <i>Advanced Materials</i> , 2010, 22, 3242-3246.	11.1	67
40	Synthesis of Zigzag Carbon Nanobelts through Scholl Reactions. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 10311-10318.	7.2	67
41	Degradation mechanism of organic solar cells with aluminum cathode. <i>Solar Energy Materials and Solar Cells</i> , 2011, 95, 3303-3310.	3.0	65
42	The application of a high- <i>k</i> polymer in flexible low-voltage organic thin-film transistors. <i>Journal of Materials Chemistry</i> , 2012, 22, 15998.	6.7	65
43	Ambipolar organic semiconductors from electron-accepting cyclopenta-fused anthracene. <i>Chemical Communications</i> , 2013, 49, 4301-4303.	2.2	65
44	Synthesis, Molecular Packing, and Thin Film Transistors of Dibenzo[<i>a,m</i>]rubicenes. <i>Journal of the American Chemical Society</i> , 2015, 137, 16203-16208.	6.6	65
45	Recent progress in interface engineering of organic thin film transistors with self-assembled monolayers. <i>Materials Chemistry Frontiers</i> , 2018, 2, 11-21.	3.2	65
46	Hydrogen-Bonded Dihydotetraazapentacenes. <i>Organic Letters</i> , 2012, 14, 1050-1053.	2.4	64
47	Boosting the electron mobility of solution-grown organic single crystals via reducing the amount of polar solvent residues. <i>Materials Horizons</i> , 2016, 3, 119-123.	6.4	64
48	Synthesis, Structure, and Properties of Tetrabenzo[7]circulene. <i>Organic Letters</i> , 2017, 19, 2246-2249.	2.4	64
49	A Meaningful Analogue of Pentacene: Charge Transport, Polymorphs, and Electronic Structures of Dihydrodiazapentacene. <i>Chemistry of Materials</i> , 2009, 21, 1400-1405.	3.2	63
50	Highly Electron-Deficient Hexaazapentacenes and Their Dihydro Precursors. <i>Organic Letters</i> , 2012, 14, 4190-4193.	2.4	60
51	Revisiting zethrene: synthesis, reactivity and semiconductor properties. <i>Chemical Science</i> , 2013, 4, 3294.	3.7	59
52	A Recyclable Electrochemical Allylation in Water. <i>Organic Letters</i> , 2005, 7, 1903-1905.	2.4	58
53	A Twisted Nanographene Consisting of 96 Carbon Atoms. <i>Angewandte Chemie</i> , 2017, 129, 9131-9135.	1.6	53
54	Massively Parallel Patterning of Complex 2D and 3D Functional Polymer Brushes by Polymer Pen Lithography. <i>ACS Applied Materials & Interfaces</i> , 2014, 6, 11955-11964.	4.0	52

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55	Solution-Processed Ambipolar Organic Thin-Film Transistors by Blending p- and n-Type Semiconductors: Solid Solution versus Microphase Separation. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 28019-28026.	4.0	51
56	High hole mobility of 1,2-bis[4-(diphenylamino)biphenyl-4-yl]-1,2-diphenylethene in field effect transistor. <i>Chemical Communications</i> , 2011, 47, 6924.	2.2	50
57	A Near-Infrared Absorbing and Emissive Quadruple Helicene Enabled by the Scholl Reaction of Perylene. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	50
58	Single crystal n-channel field effect transistors from solution-processed silylethynylated tetraazapentacene. <i>Journal of Materials Chemistry</i> , 2011, 21, 15201.	6.7	48
59	Conjugated macrocycles of phenanthrene: a new segment of [6,6]-carbon nanotube and solution-processed organic semiconductors. <i>Chemical Science</i> , 2013, 4, 4525.	3.7	48
60	Resonant Raman scattering in nanoscale pentacene films. <i>Applied Physics Letters</i> , 2004, 84, 987-989.	1.5	45
61	Benzo[4,5]cyclohepta[1,2-b]fluorene: an isomeric motif for pentacene containing linearly fused five-, six- and seven-membered rings. <i>Chemical Science</i> , 2016, 7, 6176-6181.	3.7	45
62	A Tetraazapentacene-Pyrene Belt: Toward Synthesis of N-Doped Zigzag Carbon Nanobelts. <i>Organic Letters</i> , 2019, 21, 10120-10124.	2.4	45
63	Recent advances and attempts in synthesis of conjugated nanobelts. <i>Journal of Physical Organic Chemistry</i> , 2020, 33, e4145.	0.9	45
64	A Dipleadiene-Embedded Aromatic Saddle Consisting of 86 Carbon Atoms. <i>Angewandte Chemie</i> , 2018, 130, 1597-1602.	1.6	44
65	Direct Patterning of Self-Assembled Monolayers by Stamp Printing Method and Applications in High Performance Organic Field-Effect Transistors and Complementary Inverters. <i>Advanced Functional Materials</i> , 2015, 25, 6112-6121.	7.8	43
66	Crystal Engineering of Biphenylene-Containing Acenes for High-Mobility Organic Semiconductors. <i>Journal of the American Chemical Society</i> , 2019, 141, 3589-3596.	6.6	43
67	Structured and functionalized organic semiconductors for chemical and biological sensors based on organic field effect transistors. <i>Materials Chemistry Frontiers</i> , 2020, 4, 3505-3520.	3.2	42
68	Charging a Negatively Curved Nanographene and Its Covalent Network. <i>Journal of the American Chemical Society</i> , 2021, 143, 5231-5238.	6.6	42
69	Unexpected Photooxidation of H-Bonded Tetracene. <i>Organic Letters</i> , 2008, 10, 2007-2010.	2.4	41
70	Transistors from a conjugated macrocycle molecule: field and photo effects. <i>Chemical Communications</i> , 2008, , 4324.	2.2	39
71	Molecular design of n-type organic semiconductors for high-performance thin film transistors. <i>Tetrahedron Letters</i> , 2017, 58, 1903-1911.	0.7	39
72	Interlayer Cross-Linked 2D Perovskite Solar Cell with Uniform Phase Distribution and Increased Exciton Coupling. <i>Solar Rrl</i> , 2020, 4, 1900578.	3.1	39

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73	Functionalized π -Stacks of Hexabenzoperylene as a Platform for Chemical and Biological Sensing. <i>CheM</i> , 2018, 4, 1416-1426.	5.8	38
74	Polymer Pen Lithography Using Dual- π -Elastomer Tip Arrays. <i>Small</i> , 2012, 8, 2664-2669.	5.2	37
75	Extension of N -Heteroacenes through a Four-Membered Ring. <i>Chemistry - A European Journal</i> , 2016, 22, 6637-6642.	1.7	33
76	Facile passivation of solution-processed InZnO thin-film transistors by octadecylphosphonic acid self-assembled monolayers at room temperature. <i>Applied Physics Letters</i> , 2014, 104, .	1.5	32
77	Synthesis, solution-processed thin film transistors and solid solutions of silylethynylated diazatetracenes. <i>Chemical Communications</i> , 2014, 50, 12828-12831.	2.2	32
78	Organic Heterojunctions Formed by Interfacing Two Single Crystals from a Mixed Solution. <i>Journal of the American Chemical Society</i> , 2019, 141, 10007-10015.	6.6	31
79	Heteroatom-Bridged Tetraphenylenes: Synthesis, Structures, and Properties. <i>Organic Letters</i> , 2014, 16, 3252-3255.	2.4	30
80	Connecting two phenazines with a four-membered ring: the synthesis, properties and applications of cyclobuta[1,2- b :3,4- b']diphenazines. <i>Journal of Materials Chemistry C</i> , 2018, 6, 3651-3657.	2.7	29
81	Synthesis of a Hydrogenated Zigzag Carbon Nanobelt. <i>CCS Chemistry</i> , 2021, 3, 613-619.	4.6	29
82	Thermotropic liquid crystals based on 1,8,9,16-tetrasubstituted tetraphenylenes and their structure-property relationship studies. <i>Chemical Science</i> , 2011, 2, 1068.	3.7	28
83	Synthesis of Zigzag Carbon Nanobelts through Scholl Reactions. <i>Angewandte Chemie</i> , 2021, 133, 10399-10406.	1.6	28
84	Quantitative determination of scattering mechanism in large-area graphene on conventional and SAM-functionalized substrates at room temperature. <i>Nanoscale</i> , 2013, 5, 5784.	2.8	27
85	Revisiting Indolo[3,2- b]carbazole: Synthesis, Structures, Properties, and Applications. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 9678-9683.	7.2	27
86	Vapochromic and semiconducting solids of a bifunctional hydrocarbon. <i>Chemical Science</i> , 2011, 2, 2402.	3.7	26
87	Barbier-type reaction mediated with tin nano-particles in water. <i>Tetrahedron</i> , 2005, 61, 2521-2527.	1.0	25
88	Heptagons in Aromatics: From Monocyclic to Polycyclic. <i>Chemical Record</i> , 2015, 15, 1156-1159.	2.9	24
89	Carbazole-Fused Polycyclic Aromatics Enabled by Regioselective Scholl Reactions. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 24124-24130.	7.2	24
90	Design, Synthesis and Hydrogen Bonding of B_3N_6 -[4]Triangulene. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 21289-21294.	7.2	23

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91	A Near-Infrared Absorbing and Emissive Quadruple Helicene Enabled by the Scholl Reaction of Perylene. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	23
92	Molecular packing and n-channel thin film transistors of chlorinated cyclobuta[1,2-b:3,4-b ²]diquinoxalines. <i>Chemical Communications</i> , 2015, 51, 4275-4278.	2.2	22
93	From Phenanthrylene Butadiynylene Macrocycles to S-Heterocycloarenes. <i>Organic Letters</i> , 2018, 20, 4259-4262.	2.4	22
94	Ternary blend bulk heterojunction photovoltaic cells with an ambipolar small molecule as the cascade material. <i>RSC Advances</i> , 2014, 4, 1087-1092.	1.7	20
95	Induced crystallization of rubrene with diazapentacene as the template. <i>Journal of Materials Chemistry</i> , 2012, 22, 4396.	6.7	19
96	A Luminescent Nitrogen-Containing Polycyclic Aromatic Hydrocarbon Synthesized by Photocyclodehydrogenation with Unprecedented Regioselectivity. <i>Chemistry - A European Journal</i> , 2015, 21, 17973-17980.	1.7	17
97	Insulating Polymers for Enhancing the Efficiency of Nonfullerene Organic Solar Cells. <i>Solar Rrl</i> , 2020, 4, 2000013.	3.1	17
98	Engineering Thin Films of a Tetrabenzoporphyrin toward Efficient Charge-Carrier Transport: Selective Formation of a Brickwork Motif. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 8211-8218.	4.0	16
99	Tertiary Amines Differentiated from Primary and Secondary Amines by Active Ester-Functionalized Hexabenzoperylene in Field Effect Transistors. <i>Chemistry - an Asian Journal</i> , 2019, 14, 1676-1680.	1.7	15
100	From tetrabenzoheptafulvalene to sp ² carbon nano-rings. <i>Organic Chemistry Frontiers</i> , 2017, 4, 699-703.	2.3	14
101	Trifluoromethylation of Anthraquinones for n-Type Organic Semiconductors in Field Effect Transistors. <i>Journal of Organic Chemistry</i> , 2020, 85, 44-51.	1.7	14
102	A Transfer Method for High-Mobility, Bias-Stable, and Flexible Organic Field-Effect Transistors. <i>Advanced Materials Technologies</i> , 2020, 5, 2000169.	3.0	14
103	N-Phenylated N-Heteroacenes: Synthesis, Structures, and Properties. <i>ChemPlusChem</i> , 2017, 82, 1034-1038.	1.3	12
104	Synthesis of Tribenzo[a , c , e]cyclooctene Oligomers: Toward Negatively Curved Nanocarbons. <i>ChemPlusChem</i> , 2019, 84, 627-629.	1.3	12
105	An 80-Carbon Aromatic Saddle Enabled by a Naphthalene-Directed Scholl Reaction. <i>Organic Materials</i> , 2020, 02, 248-252.	1.0	12
106	Synthesis, aromatization and cavitates of an oxanorbornene-fused dibenzo[<i>c</i> , <i>q</i>]tetracene nanobox. <i>Chemical Science</i> , 2022, 13, 2280-2285.	3.7	12
107	Revisiting Indolo[3,2- <i>b</i>]carbazole: Synthesis, Structures, Properties, and Applications. <i>Angewandte Chemie</i> , 2020, 132, 9765-9770.	1.6	11
108	Control of polymorphism in solution-processed organic thin film transistors by self-assembled monolayers. <i>Science China Chemistry</i> , 2020, 63, 1221-1229.	4.2	11

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109	Rearrangements come to Scholl. <i>Nature Reviews Chemistry</i> , 2021, 5, 602-603.	13.8	11
110	Studies toward the Synthesis of Hepta-peri-heptabenzo-[7]circulene. <i>Synlett</i> , 2016, 27, 2091-2094.	1.0	8
111	A Trefoil Macrocyclic Synthesized by 3-Fold Benzannulation. <i>Organic Letters</i> , 2018, 20, 6952-6956.	2.4	8
112	A ketone-functionalized aromatic saddle as a potential building block for negatively curved carbon nanobelts. <i>Chinese Chemical Letters</i> , 2019, 30, 1506-1508.	4.8	8
113	Efficiency enhancement of organic photovoltaics by introducing high-mobility curved small-molecule semiconductors as additives. <i>Journal of Materials Chemistry A</i> , 2019, 7, 12740-12750.	5.2	8
114	Anodization for Simplified Processing and Efficient Charge Transport in Vertical Organic Field-Effect Transistors. <i>Advanced Functional Materials</i> , 2020, 30, 2001703.	7.8	6
115	Carbazole-Fused Polycyclic Aromatics Enabled by Regioselective Scholl Reactions. <i>Angewandte Chemie</i> , 2021, 133, 21459-21464.	1.6	5
116	Induced Crystallization of Rubrene in Thin-Film Transistors (Adv. Mater. 30/2010). <i>Advanced Materials</i> , 2010, 22, .	11.1	4
117	Design, Synthesis and Hydrogen Bonding of B ₃ N ₆ -[4]Triangulene. <i>Angewandte Chemie</i> , 2021, 133, 21459-21464.	1.6	4
118	Synthesis, Structures and Properties of Bis(naphthocyclobuta)pyrenes. <i>European Journal of Organic Chemistry</i> , 2022, 2022, e202101315.	1.2	4
119	Chemoselective Carbonyl Benzoylation Mediated by Zn / CdCl ₂ / InCl ₃ in Tap Water. <i>Letters in Organic Chemistry</i> , 2005, 2, 61-64.	0.2	3
120	Sensitivity of gas sensors enhanced by functionalization of hexabenzoperylene in solution-processed monolayer organic field effect transistors. <i>Chemical Communications</i> , 2022, 58, 7046-7049.	2.2	3
121	Self-assembled dipoles of <i>o</i> -carborane on gate oxide tuning charge carriers in organic field effect transistors. <i>Journal of Materials Chemistry C</i> , 2022, 10, 2690-2695.	2.7	2
122	Introduction of Eight-Membered Rings to Polycyclic Arenes by Ring Expansion. <i>Chinese Journal of Organic Chemistry</i> , 2020, 40, 3347.	0.6	2
123	Allylation of Carbonyl Compounds Mediated by Nanometer-Sized Bismuth in Water. <i>Synlett</i> , 2004, 2004, 1171-1174.	1.0	1
124	A Recyclable Electrochemical Allylation in Water.. <i>ChemInform</i> , 2005, 36, no.	0.1	1
125	Titelbild: A Twisted Nanographene Consisting of 96 Carbon Atoms (Angew. Chem. 31/2017). <i>Angewandte Chemie</i> , 2017, 129, 9031-9031.	1.6	1
126	Organic Heteroepitaxy Growth of High-Performance Responsive Thin Films with Solution Shearing Crystals as Templates. , 2022, 4, 1314-1321.		1

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127	Probing Nanoscale Pentacene Films by Resonant Raman Scattering. AIP Conference Proceedings, 2005, ,	0.3	0