Delia J Milliron

List of Publications by Year
in descending order

133 papers	11,222 citations	57758 44 h-index	29157 104 g-index
138 all docs	138 docs citations	138 times ranked	12499 citing authors

#	Article	IF	Citations
1	Colloidal nanocrystal heterostructures with linear and branched topology. Nature, 2004, 430, 190-195.	27.8	1,127
2	Prospects of Nanoscience with Nanocrystals. ACS Nano, 2015, 9, 1012-1057.	14.6	1,005
3	Tunable near-infrared and visible-light transmittance in nanocrystal-in-glass composites. Nature, 2013, 500, 323-326.	27.8	742
4	Localized Surface Plasmon Resonance in Semiconductor Nanocrystals. Chemical Reviews, 2018, 118, 3121-3207.	47.7	656
5	Dynamically Modulating the Surface Plasmon Resonance of Doped Semiconductor Nanocrystals. Nano Letters, 2011, 11, 4415-4420.	9.1	491
6	Tunable Infrared Absorption and Visible Transparency of Colloidal Aluminum-Doped Zinc Oxide Nanocrystals. Nano Letters, 2011, 11, 4706-4710.	9.1	443
7	Nanostructured electrochromic smart windows: traditional materials and NIR-selective plasmonic nanocrystals. Chemical Communications, 2014, 50, 10555-10572.	4.1	422
8	Switchable Materials for Smart Windows. Annual Review of Chemical and Biomolecular Engineering, 2016, 7, 283-304.	6.8	367
9	Chemistry of Doped Colloidal Nanocrystals. Chemistry of Materials, 2013, 25, 1305-1317.	6.7	310
10	Exceptionally Mild Reactive Stripping of Native Ligands from Nanocrystal Surfaces by Using Meerweinâ€™s Salt. Angewandte Chemie - International Edition, 2012, 51, 684-689.	13.8	240
11	Defect Chemistry and Plasmon Physics of Colloidal Metal Oxide Nanocrystals. Journal of Physical Chemistry Letters, 2014, 5, 1564-1574.	4.6	218
12	Reproducible, High-Throughput Synthesis of Colloidal Nanocrystals for Optimization in Multidimensional Parameter Space. Nano Letters, 2010, 10, 1874-1885.	9.1	201
13	Nanocomposite Architecture for Rapid, Spectrally-Selective Electrochromic Modulation of Solar Transmittance. Nano Letters, 2015, 15, 5574-5579.	9.1	179
14	Nb-Doped Colloidal TiO₂ Nanocrystals with Tunable Infrared Absorption. Chemistry of Materials, 2013, 25, 3383-3390.	6.7	177
15	Control of Localized Surface Plasmon Resonances in Metal Oxide Nanocrystals. Annual Review of Materials Research, 2017, 47, 1-31.	9.3	163
16	Influence of Dopant Distribution on the Plasmonic Properties of Indium Tin Oxide Nanocrystals. Journal of the American Chemical Society, 2014, 136, 7110-7116.	13.7	160
17	Linear topology in amorphous metal oxide electrochromic networks obtained via low-temperature solution processing. Nature Materials, 2016, 15, 1267-1273.	27.5	155
18	Impacts of surface depletion on the plasmonic properties of doped semiconductor nanocrystals. Nature Materials, 2018, 17, 710-717.	27.5	135

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19	Influence of Shape on the Surface Plasmon Resonance of Tungsten Bronze Nanocrystals. Chemistry of Materials, 2014, 26, 1779-1784.	6.7	133
20	Redox Chemistries and Plasmon Energies of Photodoped In₂O₃ and Sn-Doped In₂O₃ (ITO) Nanocrystals. Journal of the American Chemical Society, 2015, 137, 518-524.	13.7	132
21	United States energy and CO2 savings potential from deployment of near-infrared electrochromic window glazings. Building and Environment, 2015, 89, 107-117.	6.9	124
22	Nearâ€Infrared Spectrally Selective Plasmonic Electrochromic Thin Films. Advanced Optical Materials, 2013, 1, 215-220.	7.3	123
23	Defect Engineering in Plasmonic Metal Oxide Nanocrystals. Nano Letters, 2016, 16, 3390-3398.	9.1	122
24	Understanding the Plasmon Resonance in Ensembles of Degenerately Doped Semiconductor Nanocrystals. Journal of Physical Chemistry C, 2012, 116, 12226-12231.	3.1	109
25	A comparative energy analysis of three electrochromic glazing technologies in commercial and residential buildings. Applied Energy, 2017, 192, 95-109.	10.1	108
26	Spectroelectrochemical Signatures of Capacitive Charging and Ion Insertion in Doped Anatase Titania Nanocrystals. Journal of the American Chemical Society, 2015, 137, 9160-9166.	13.7	103
27	Shape-Dependent Field Enhancement and Plasmon Resonance of Oxide Nanocrystals. Journal of Physical Chemistry C, 2015, 119, 6227-6238.	3.1	102
28	Electronically Coupled Nanocrystal Superlattice Films by <i>in Situ</i> Ligand Exchange at the Liquidâ€"Air Interface. ACS Nano, 2013, 7, 10978-10984.	14.6	101
29	Template-Free Mesoporous Electrochromic Films on Flexible Substrates from Tungsten Oxide Nanorods. Nano Letters, 2017, 17, 5756-5761.	9.1	95
30	Resonant Coupling between Molecular Vibrations and Localized Surface Plasmon Resonance of Faceted Metal Oxide Nanocrystals. Nano Letters, 2017, 17, 2611-2620.	9.1	94
31	Assembly of Ligand-Stripped Nanocrystals into Precisely Controlled Mesoporous Architectures. Nano Letters, 2012, 12, 3872-3877.	9.1	88
32	General Method for the Synthesis of Hierarchical Nanocrystal-Based Mesoporous Materials. ACS Nano, 2012, 6, 6386-6399.	14.6	85
33	Direct observation of narrow mid-infrared plasmon linewidths of single metal oxide nanocrystals. Nature Communications, 2016, 7, 11583.	12.8	78
34	The Interplay of Shape and Crystalline Anisotropies in Plasmonic Semiconductor Nanocrystals. Nano Letters, 2016, 16, 3879-3884.	9.1	75
35	Polyoxometalates and colloidal nanocrystals as building blocks for metal oxide nanocomposite films. Journal of Materials Chemistry, 2011, 21, 11631.	6.7	70
36	Comparison of extra electrons in colloidal n-type Al3+-doped and photochemically reduced ZnO nanocrystals. Chemical Communications, 2012, 48, 9352.	4.1	70

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37	Extracting reliable electronic properties from transmission spectra of indium tin oxide thin films and nanocrystal films by careful application of the Drude theory. Journal of Applied Physics, 2012, 111, .	2.5	70
38	Importance of doping, dopant distribution, and defects on electronic band structure alteration of metal oxide nanoparticles: Implications for reactive oxygen species. Science of the Total Environment, 2016, 568, 926-932.	8.0	56
39	High Mobility in Nanocrystal-Based Transparent Conducting Oxide Thin Films. ACS Nano, 2018, 12, 3200-3208.	14.6	55
40	Enhanced Coloration Efficiency of Electrochromic Tungsten Oxide Nanorods by Site Selective Occupation of Sodium Ions. Nano Letters, 2020, 20, 2072-2079.	9.1	55
41	NIR-Selective electrochromic heteromaterial frameworks: a platform to understand mesoscale transport phenomena in solid-state electrochemical devices. Journal of Materials Chemistry C, 2014, 2, 3328.	5.5	53
42	The surface plays a core role. Nature Materials, 2014, 13, 772-773.	27.5	51
43	Constructing Functional Mesostructured Materials from Colloidal Nanocrystal Building Blocks. Accounts of Chemical Research, 2014, 47, 236-246.	15.6	50
44	Low Temperature Synthesis and Surface Plasmon Resonance of Colloidal Lanthanum Hexaboride (LaB₆) Nanocrystals. Chemistry of Materials, 2015, 27, 6620-6624.	6.7	46
45	Dopant Selection Strategy for High-Quality Factor Localized Surface Plasmon Resonance from Doped Metal Oxide Nanocrystals. Chemistry of Materials, 2019, 31, 7752-7760.	6.7	46
46	Linking Semiconductor Nanocrystals into Gel Networks through Allâ€Inorganic Bridges. Angewandte Chemie - International Edition, 2015, 54, 14840-14844.	13.8	45
47	Sub-micron Polymerâ€“Zeolitic Imidazolate Framework Layered Hybrids via Controlled Chemical Transformation of Naked ZnO Nanocrystal Films. Chemistry of Materials, 2015, 27, 7673-7679.	6.7	45
48	Tuning Nanocrystal Surface Depletion by Controlling Dopant Distribution as a Route Toward Enhanced Film Conductivity. Nano Letters, 2018, 18, 2870-2878.	9.1	45
49	Quantitative Analysis of Extinction Coefficients of Tin-Doped Indium Oxide Nanocrystal Ensembles. Nano Letters, 2019, 19, 8149-8154.	9.1	43
50	Electrochromic Niobium Oxide Nanorods. Chemistry of Materials, 2020, 32, 468-475.	6.7	42
51	Ionic and Electronic Transport in Ag₂S Nanocrystalâ€“GeS₂ Matrix Composites with Sizeâ€Controlled Ag₂S Nanocrystals. Advanced Materials, 2012, 24, 99-103.	21.0	41
52	Carbonâ€Free TiO₂ Battery Electrodes Enabled by Morphological Control at the Nanoscale. Advanced Energy Materials, 2013, 3, 1286-1291.	19.5	41
53	Syntheses of Colloidal F:In₂O₃ Cubes: Fluorine-Induced Faceting and Infrared Plasmonic Response. Chemistry of Materials, 2019, 31, 2661-2676.	6.7	41
54	Synthesis and Phase Stability of Metastable Bixbyite V2O3Colloidal Nanocrystals. Chemistry of Materials, 2013, 25, 3172-3179.	6.7	40

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55	Electrochemically Induced Transformations of Vanadium Dioxide Nanocrystals. Nano Letters, 2016, 16, 6021-6027.	9.1	40
56	Transparent Conductive Oxide Nanocrystals Coated with Insulators by Atomic Layer Deposition. Chemistry of Materials, 2016, 28, 5549-5553.	6.7	39
57	Solution Synthesis and Assembly of Wurtzite-Derived Cuâ€"Inâ€"Znâ€"S Nanorods with Tunable Composition and Band Gap. Chemistry of Materials, 2015, 27, 1517-1523.	6.7	38
58	Rescaling of metal oxide nanocrystals for energy storage having high capacitance and energy density with robust cycle life. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7914-7919.	7.1	38
59	Competition between Depletion Effects and Coupling in the Plasmon Modulation of Doped Metal Oxide Nanocrystals. Nano Letters, 2019, 19, 2012-2019.	9.1	37
60	Anisotropic Origins of Localized Surface Plasmon Resonance in n-Type Anatase TiO₂ Nanocrystals. Chemistry of Materials, 2019, 31, 502-511.	6.7	37
61	Spectrally tunable infrared plasmonic F,Sn:In2O3 nanocrystal cubes. Journal of Chemical Physics, 2020, 152, 014709.	3.0	33
62	Synergistic Role of Dopants on the Morphology of Alloyed Copper Chalcogenide Nanocrystals. Journal of the American Chemical Society, 2015, 137, 6464-6467.	13.7	32
63	Gelation of plasmonic metal oxide nanocrystals by polymer-induced depletion attractions. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 8925-8930.	7.1	32
64	Surface Depletion Layers in Plasmonic Metal Oxide Nanocrystals. Accounts of Chemical Research, 2019, 52, 2516-2524.	15.6	32
65	Core/Shell Approach to Dopant Incorporation and Shape Control in Colloidal Zinc Oxide Nanorods. Chemistry of Materials, 2016, 28, 3454-3461.	6.7	31
66	Evolution of Ordered Metal Chalcogenide Architectures through Chemical Transformations. Journal of the American Chemical Society, 2013, 135, 7446-7449.	13.7	30
67	Interactions and design rules for assembly of porous colloidal mesophases. Soft Matter, 2017, 13, 1335-1343.	2.7	29
68	Rationalizing the Impact of Surface Depletion on Electrochemical Modulation of Plasmon Resonance Absorption in Metal Oxide Nanocrystals. ACS Photonics, 2018, 5, 2044-2050.	6.6	29
69	Thermal Stability of the Black Perovskite Phase in Cesium Lead Iodide Nanocrystals Under Humid Conditions. Chemistry of Materials, 2019, 31, 9750-9758.	6.7	29
70	Synthesis and Dual-Mode Electrochromism of Anisotropic Monoclinic Nb₁₂O₂₉Colloidal Nanoplatelets. ACS Nano, 2020, 14, 10068-10082.	14.6	29
71	Nanoporous Semiconductors Synthesized Through Polymer Templating of Ligandâ€Stripped CdSe Nanocrystals. Advanced Materials, 2013, 25, 1315-1322.	21.0	28
72	Structure and phase behavior of polymer-linked colloidal gels. Journal of Chemical Physics, 2019, 151, 124901.	3.0	28

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73	Dynamics of Lithium Insertion in Electrochromic Titanium Dioxide Nanocrystal Ensembles. Journal of the American Chemical Society, 2021, 143, 8278-8294.	13.7	28
74	Dispersible Plasmonic Doped Metal Oxide Nanocrystal Sensors that Optically Track Redox Reactions in Aqueous Media with Singleâ€Electron Sensitivity. Advanced Optical Materials, 2015, 3, 1293-1300.	7.3	27
75	Assembly of Linked Nanocrystal Colloids by Reversible Covalent Bonds. Chemistry of Materials, 2020, 32, 10235-10245.	6.7	27
76	Assembling Inorganic Nanocrystal Gels. Nano Letters, 2022, 22, 1457-1466.	9.1	27
77	Colloidal Nanocrystal Gels from Thermodynamic Principles. Accounts of Chemical Research, 2021, 54, 798-807.	15.6	26
78	Disentangling Photochromism and Electrochromism by Blocking Hole Transfer at the Electrolyte Interface. Chemistry of Materials, 2016, 28, 7198-7202.	6.7	24
79	Wide Dynamic Range in Tunable Electrochromic Bragg Stacks from Doped Semiconductor Nanocrystals. Advanced Functional Materials, 2019, 29, 1904555.	14.9	23
80	Colloidal ReO₃ Nanocrystals: Extra Re d-Electron Instigating a Plasmonic Response. Journal of the American Chemical Society, 2019, 141, 16331-16343.	13.7	23
81	Controlling the Shape Anisotropy of Monoclinic Nb₁₂O₂₉ Nanocrystals Enables Tunable Electrochromic Spectral Range. Journal of the American Chemical Society, 2021, 143, 15745-15755.	13.7	23
82	Influence of Crystalline and Shape Anisotropy on Electrochromic Modulation in Doped Semiconductor Nanocrystals. ACS Energy Letters, 2020, 5, 2662-2670.	17.4	22
83	Intrinsic Optical and Electronic Properties from Quantitative Analysis of Plasmonic Semiconductor Nanocrystal Ensemble Optical Extinction. Journal of Physical Chemistry C, 2020, 124, 24351-24360.	3.1	22
84	Ordering in Polymer Micelle-Directed Assemblies of Colloidal Nanocrystals. Nano Letters, 2015, 15, 8240-8244.	9.1	21
85	Charge carrier concentration dependence of ultrafast plasmonic relaxation in conducting metal oxide nanocrystals. Journal of Materials Chemistry C, 2017, 5, 5757-5763.	5.5	20
86	Bismuth Enhances the Stability of CH₃NH₃PbI₃ (MAPI) Perovskite under High Humidity. Journal of Physical Chemistry C, 2019, 123, 963-970.	3.1	20
87	Colloidal Nanocrystal Frameworks. Advanced Materials, 2015, 27, 5820-5829.	21.0	19
88	Dopant Mediated Assembly of Cu₂ZnSnS₄ Nanorods into Atomically Coupled 2D Sheets in Solution. Nano Letters, 2017, 17, 3421-3428.	9.1	19
89	Efficient polymer passivation of ligandâ€stripped nanocrystal surfaces. Journal of Polymer Science Part A, 2012, 50, 3719-3727.	2.3	18
90	Direct Electrochemical Deposition of Transparent Metal Oxide Thin Films from Polyoxometalates. Chemistry of Materials, 2020, 32, 4600-4608.	6.7	18

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91	Influence of Surface Composition on Electronic Transport through Naked Nanocrystal Networks. Chemistry of Materials, 2014, 26, 2214-2217.	6.7	16
92	Modulation of the Visible Absorption and Reflection Profiles of ITO Nanocrystal Thin Films by Plasmon Excitation. ACS Photonics, 2020, 7, 1188-1196.	6.6	16
93	Universal Gelation of Metal Oxide Nanocrystals via Depletion Attractions. Nano Letters, 2020, 20, 4007-4013.	9.1	16
94	Efficient Aqueous Electroreduction of CO₂ to Formate at Low Overpotential on Indium Tin Oxide Nanocrystals. Chemistry of Materials, 2021, 33, 7675-7685.	6.7	16
95	Dual-Band Electrochromism: Plasmonic and Polaronic Mechanisms. Journal of Physical Chemistry C, 2022, 126, 9228-9238.	3.1	16
96	Phosphonic Acid Adsorbates Tune the Surface Potential of TiO₂ in Gas and Liquid Environments. Journal of Physical Chemistry Letters, 2014, 5, 2450-2454.	4.6	15
97	Effects of linker flexibility on phase behavior and structure of linked colloidal gels. Journal of Chemical Physics, 2021, 154, 074901.	3.0	15
98	Quantitative Analysis of Plasmonic Metal Oxide Nanocrystal Ensembles Reveals the Influence of Dopant Selection on Intrinsic Optoelectronic Properties. Chemistry of Materials, 2021, 33, 6955-6964.	6.7	15
99	Separating Physically Distinct Mechanisms in Complex Infrared Plasmonic Nanostructures via Machine Learning Enhanced Electron Energy Loss Spectroscopy. Advanced Optical Materials, 2021, 9, 2001808.	7.3	13
100	Understanding the Role of Charge Storage Mechanisms in the Electrochromic Switching Kinetics of Metal Oxide Nanocrystals. Chemistry of Materials, 2022, 34, 5621-5633.	6.7	13
101	Oxygen Incorporation and Release in Metastable Bixbyite V₂O₃ Nanocrystals. ACS Nano, 2016, 10, 6147-6155.	14.6	12
102	Solvothermally-synthesized tin-doped indium oxide plasmonic nanocrystals spray-deposited onto glass as near-infrared electrochromic films. Solar Energy Materials and Solar Cells, 2019, 200, 110014.	6.2	12
103	Aqueous Processing and Spray Deposition of Polymer-Wrapped Tin-Doped Indium Oxide Nanocrystals as Electrochromic Thin Films. Chemistry of Materials, 2020, 32, 8401-8411.	6.7	12
104	Dual-Mode Infrared Absorption by Segregating Dopants within Plasmonic Semiconductor Nanocrystals. Nano Letters, 2020, 20, 7498-7505.	9.1	12
105	Colorimetric quantification of linking in thermoreversible nanocrystal gel assemblies. Science Advances, 2022, 8, eabm7364.	10.3	12
106	Effect of Nonincorporative Cations on the Size and Shape of Indium Oxide Nanocrystals. Chemistry of Materials, 2020, 32, 9347-9354.	6.7	11
107	Nanocrystal Superlattice Embedded within an Inorganic Semiconducting Matrix by in Situ Ligand Exchange: Fabrication and Morphology. Chemistry of Materials, 2015, 27, 2755-2758.	6.7	10
108	Colloidal Nanocrystal Films Reveal the Mechanism for Intermediate Temperature Proton Conductivity in Porous Ceramics. Journal of Physical Chemistry C, 2018, 122, 13624-13635.	3.1	10

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109	Addition of Monovalent Silver Cations to CH₃NH₃PbBr₃ Produces Crystallographically Oriented Perovskite Thin Films. ACS Applied Energy Materials, 2019, 2, 6087-6096.	5.1	10
110	Transport Mechanisms Underlying Ionic Conductivity in Nanoparticle-Based Single-Ion Electrolytes. Journal of Physical Chemistry Letters, 2020, 11, 6970-6975.	4.6	10
111	Wertheimâ€™s thermodynamic perturbation theory with double-bond association and its application to colloidâ€“linker mixtures. Journal of Chemical Physics, 2021, 154, 024905.	3.0	10
112	A self-degradable hydrogel sensor for a nerve agent tabun surrogate through a self-propagating cascade. Cell Reports Physical Science, 2021, 2, 100552.	5.6	9
113	Investigating the Role of Surface Depletion in Governing Electron-Transfer Events in Colloidal Plasmonic Nanocrystals. Chemistry of Materials, 2022, 34, 777-788.	6.7	8
114	Understanding the Hydrothermal Formation of NaNbO3: Its Full Reaction Scheme and Kinetics. Inorganic Chemistry, 2021, 60, 7632-7640.	4.0	7
115	Nearest-neighbour nanocrystal bonding dictates framework stability or collapse in colloidal nanocrystal frameworks. Chemical Communications, 2017, 53, 4853-4856.	4.1	6
116	<i>In Situ</i> Optical Quantification of Extracellular Electron Transfer Using Plasmonic Metal Oxide Nanocrystals**. ChemElectroChem, 2022, 9, .	3.4	6
117	Deliquescent Chromism of Nickel(II) Iodide Thin Films. Langmuir, 2019, 35, 2146-2152.	3.5	5
118	Enhancing hyperspectral EELS analysis of complex plasmonic nanostructures with pan-sharpening. Journal of Chemical Physics, 2021, 154, 014202.	3.0	5
119	Sculpting the Plasmonic Responses of Nanoparticles by Directed Electron Beam Irradiation. Small, 2022, 18, e2105099.	10.0	5
120	Controlling Morphology in Polycrystalline Films by Nucleation and Growth from Metastable Nanocrystals. Nano Letters, 2018, 18, 5530-5537.	9.1	4
121	Oxygen Storage in Transition Metal-Doped Bixbyite Vanadium Sesquioxide Nanocrystals. ACS Applied Nano Materials, 2020, 3, 9645-9651.	5.0	4
122	Ultraviolet photovoltaics: Share the spectrum. Nature Energy, 2017, 2, .	39.5	3
123	Beyond NMF: Advanced Signal Processing and Machine Learning Methodologies for Hyperspectral Analysis in EELS. Microscopy and Microanalysis, 2021, 27, 322-324.	0.4	3
124	Resilient Women and the Resiliency of Science. Chemistry of Materials, 2021, 33, 6585-6588.	6.7	3
125	Contact Conductance Governs Metallicity in Conducting Metal Oxide Nanocrystal Films. Nano Letters, 2022, 22, 5009-5014.	9.1	3
126	Modulation of Carrier Type in Nanocrystal-in-Matrix Composites by Interfacial Doping. Chemistry of Materials, 2018, 30, 2544-2549.	6.7	1

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127	Impact of Non-Uniform Doping on the Plasmonic Properties of In2O3 Nanoparticles: A Study by Electron Energy Loss Spectroscopy. Microscopy and Microanalysis, 2018, 24, 1684-1685.	0.4	1
128	Designed for Charge Transfer: Complexes of CdSe Nanocrystals and Oligothiophenes. Materials Research Society Symposia Proceedings, 2002, 725, 1.	0.1	0
129	Localization of Plasmons in Self-assembled Doped-semiconductor Nanocrystal Arrays. Microscopy and Microanalysis, 2020, 26, 3186-3187.	0.4	0
130	Electron beam modification of plasmonic responses of nanoparticles. Microscopy and Microanalysis, 2021, 27, 3066-3068.	0.4	0
131	Predicting local plasmon resonances and geometries using autoencoder networks in complex nanoparticle assemblies. Microscopy and Microanalysis, 2021, 27, 2766-2768.	0.4	0
132	Ultrahigh Spatial Resolution of Mid-Infrared Optical Excitations with Monochromated Electron Energy-Loss Spectroscopy. , 2020, , .		0
133	Electron Distribution in Conducting Metal Oxide Nanocrystals. , 0, , .		0