Enrico Mugnaioli

List of Publications by Year in descending order

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108 papers 4,028 citations

32 h-index 60 g-index

116 all docs

 $\frac{116}{\text{docs citations}}$

116 times ranked

4543 citing authors

#	Article	IF	CITATIONS
1	Synthesis and Structure Determination of the Hierarchical Meso-Microporous Zeolite ITQ-43. Science, 2011, 333, 1131-1134.	12.6	353
2	3D Electron Diffraction: The Nanocrystallography Revolution. ACS Central Science, 2019, 5, 1315-1329.	11.3	286
3	"Ab initio―structure solution from electron diffraction data obtained by a combination of automated diffraction tomography and precession technique. Ultramicroscopy, 2009, 109, 758-765.	1.9	281
4	Elucidating Gating Effects for Hydrogen Sorption in MFUâ€4â€Type Triazolateâ€Based Metal–Organic Frameworks Featuring Different Pore Sizes. Chemistry - A European Journal, 2011, 17, 1837-1848.	3.3	222
5	Automated electron diffraction tomography – a new tool for nano crystal structure analysis. Crystal Research and Technology, 2011, 46, 542-554.	1.3	175
6	Automated Diffraction Tomography for the Structure Elucidation of Twinned, Subâ€micrometer Crystals of a Highly Porous, Catalytically Active Bismuth Metal–Organic Framework. Angewandte Chemie - International Edition, 2012, 51, 10373-10376.	13.8	151
7	Direct Access to Metal or Metal Oxide Nanocrystals Integrated with One-Dimensional Nanoporous Carbons for Electrochemical Energy Storage. Journal of the American Chemical Society, 2010, 132, 15030-15037.	13.7	150
8	Abâ€Initio Structure Determination of Vaterite by Automated Electron Diffraction. Angewandte Chemie - International Edition, 2012, 51, 7041-7045.	13.8	98
9	Solution Synthesis of a New Thermoelectric Zn _{1+<i>x</i>} Sb Nanophase and Its Structure Determination Using Automated Electron Diffraction Tomography. Journal of the American Chemical Society, 2010, 132, 9881-9889.	13.7	94
10	The structure of charoite, (K,Sr,Ba,Mn) _{15–16} (Ca,Na) ₃₂ [(Si ₇₀ (O,OH) ₁₈₀)](OH,F) <s solved by conventional and automated electron diffraction. Mineralogical Magazine, 2010, 74, 159-177.</s 	sub ɒ.4. 0 <td>sub9x3<i>n</i>l</td>	sub9x3 <i>n</i> l
11	Structural Characterization of Organics Using Manual and Automated Electron Diffraction. Polymer Reviews, 2010, 50, 385-409.	10.9	90
12	Ultrafast Electron Diffraction Tomography for Structure Determination of the New Zeolite ITQ-58. Journal of the American Chemical Society, 2016, 138, 10116-10119.	13.7	78
13	Bismuthâ€Catalyzed Growth of SnS ₂ Nanotubes and Their Stability. Angewandte Chemie - International Edition, 2009, 48, 6426-6430.	13.8	70
14	ECSâ€3: A Crystalline Hybrid Organic–Inorganic Aluminosilicate with Open Porosity. Angewandte Chemie - International Edition, 2012, 51, 666-669.	13.8	61
15	Nanobeam precession-assisted 3D electron diffraction reveals a new polymorph of hen egg-white lysozyme. IUCrJ, 2019, 6, 178-188.	2.2	56
16	Structural Characterisation of Complex Layered Double Hydroxides and TGAâ€GCâ€MS Study on Thermal Response and Carbonate Contamination in Nitrateâ€and Organicâ€Exchanged Hydrotalcites. Chemistry - A European Journal, 2015, 21, 14975-14986.	3.3	53
17	Enzymeâ€Mediated Deposition of a TiO ₂ Coating onto Biofunctionalized WS2 Chalcogenide Nanotubes. Advanced Functional Materials, 2009, 19, 285-291.	14.9	52
18	Assembly and Separation of Semiconductor Quantum Dot Dimers and Trimers. Journal of the American Chemical Society, 2011, 133, 18062-18065.	13.7	49

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19	Heusler compounds as ternary intermetallic nanoparticles: Co ₂ FeGa. Journal Physics D: Applied Physics, 2009, 42, 084018.	2.8	46
20	Mineralogical, crystallographic and redox features of the earliest stages of fluid alteration in CM chondrites. Geochimica Et Cosmochimica Acta, 2017, 209, 106-122.	3.9	45
21	Structure analysis of titanate nanorods by automated electron diffraction tomography. Acta Crystallographica Section B: Structural Science, 2011, 67, 218-225.	1.8	44
22	Crystal Structures of Two Important Pharmaceuticals Solved by 3D Precession Electron Diffraction Tomography. Organic Process Research and Development, 2018, 22, 1365-1372.	2.7	44
23	3D Electron Diffraction for Chemical Analysis: Instrumentation Developments and Innovative Applications. Chemical Reviews, 2021, 121, 11823-11834.	47.7	40
24	Synthesis of Fullerene- and Nanotube-Like SnS ₂ Nanoparticles and Sn/S/Carbon Nanocomposites. Chemistry of Materials, 2009, 21, 2474-2481.	6.7	39
25	IM-17: a new zeolitic material, synthesis and structure elucidation from electron diffraction ADT data and Rietveld analysis. RSC Advances, 2014, 4, 19440.	3.6	38
26	Accurate and precise lattice parameters by selected-area electron diffraction in the transmission electron microscope. American Mineralogist, 2009, 94, 793-800.	1.9	37
27	Iron–clay interactions: Detailed study of the mineralogical transformation of claystone with emphasis on the formation of iron-rich T–O phyllosilicates in a step-by-step cooling experiment from 90 °C to 40 °C. Chemical Geology, 2014, 387, 1-11.	3.3	36
28	Crystalline Curcumin bioMOF Obtained by Precipitation in Supercritical CO ₂ and Structural Determination by Electron Diffraction Tomography. ACS Sustainable Chemistry and Engineering, 2018, 6, 12309-12319.	6.7	36
29	The structure of denisovite, a fibrous nanocrystalline polytypic disordered `very complex' silicate, studied by a synergistic multi-disciplinary approach employing methods of electron crystallography and X-ray powder diffraction. IUCrJ, 2017, 4, 223-242.	2.2	36
30	Applications of automated diffraction tomography (ADT) on nanocrystalline porous materials. Microporous and Mesoporous Materials, 2013, 166, 93-101.	4.4	35
31	The Crystal Structure of Orthocetamol Solved by 3D Electron Diffraction. Angewandte Chemie - International Edition, 2019, 58, 10919-10922.	13.8	34
32	Nanocrystals of Lead Chalcohalides: A Series of Kinetically Trapped Metastable Nanostructures. Journal of the American Chemical Society, 2020, 142, 10198-10211.	13.7	34
33	Facile hydrothermal synthesis of crystalline Ta2O5 nanorods, MTaO3 (M = H, Na, K, Rb) nanoparticles, and their photocatalytic behaviour. Journal of Materials Chemistry A, 2014, 2, 8033-8040.	10.3	33
34	A new hydrous Al-bearing pyroxene as a water carrier in subduction zones. Earth and Planetary Science Letters, 2011, 310, 422-428.	4.4	32
35	Essential features of the polytypic charoite-96 structure compared to charoite-90. Mineralogical Magazine, 2011, 75, 2833-2846.	1.4	31
36	Relative motion of the Adriatic with respect to the confining plates: seismological and geodetic constraints. Geophysical Journal International, 2004, 159, 765-775.	2.4	29

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37	Morphology of Sponge Spicules: Silicatein a Structural Protein for Bioâ€Silica Formation. Advanced Engineering Materials, 2010, 12, B422.	3.5	29
38	SrP ₃ N ₅ O: A Highly Condensed Layer Phosphate Structure Solved from a Nanocrystal by Automated Electron Diffraction Tomography. Chemistry - A European Journal, 2011, 17, 11258-11265.	3 . 3	29
39	A nanocrystalline monoclinic CaCO ₃ precursor of metastable aragonite. Science Advances, 2018, 4, eaau6178.	10.3	28
40	Reversible Selfâ€Assembly of Metal Chalcogenide/Metal Oxide Nanostructures Based on Pearson Hardness. Angewandte Chemie - International Edition, 2010, 49, 7578-7582.	13.8	27
41	Single-crystal analysis of nanodomains by electron diffraction tomography: mineralogy at the order-disorder borderline. Zeitschrift Fur Kristallographie - Crystalline Materials, 2018, 233, 163-178.	0.8	27
42	Interaction of Alkaline Metal Cations with Oxidic Surfaces: Effect on the Morphology of SnO ₂ Nanoparticles. Langmuir, 2010, 26, 3590-3595.	3 . 5	25
43	<i>Ab Initio</i> Structure Determination of Cu _{2–<i>x</i>} Te Plasmonic Nanocrystals by Precession-Assisted Electron Diffraction Tomography and HAADF-STEM Imaging. Inorganic Chemistry, 2018, 57, 10241-10248.	4.0	25
44	Asymmetric tungsten oxide nanobrushes via oriented attachment and Ostwald ripening. CrystEngComm, 2011, 13, 4074.	2.6	24
45	Using <i>FOCUS</i> to solve zeolite structures from three-dimensional electron diffraction data. Journal of Applied Crystallography, 2013, 46, 1017-1023.	4.5	24
46	The Bi sulfates from the Alfenza Mine, Crodo, Italy: An automatic electron diffraction tomography (ADT) study. American Mineralogist, 2014, 99, 500-510.	1.9	23
47	High-Pressure Synthesis of Novel Boron Oxynitride B6N4O3 with Sphalerite Type Structure. Chemistry of Materials, 2015, 27, 5907-5914.	6.7	22
48	Crystalline Nanorods as Possible Templates for the Synthesis of Amorphous Biosilica during Spicule Formation in Demospongiae. ChemBioChem, 2009, 10, 683-689.	2.6	21
49	Evidence of Noncentrosymmetry of Human Tooth Hydroxyapatite Crystals. Chemistry - A European Journal, 2014, 20, 6849-6852.	3.3	21
50	Hierachical Ni@Fe ₂ O ₃ superparticles through epitaxial growth of γ-Fe ₂ O ₃ nanorods on <i>in situ</i> formed Ni nanoplates. Nanoscale, 2016, 8, 9548-9555.	5 . 6	21
51	Biosilicification of loricate choanoflagellate: organic composition of the nanotubular siliceous costal strips of <i>Stephanoeca diplocostata</i>). Journal of Experimental Biology, 2010, 213, 3575-3585.	1.7	20
52	From Single Molecules to Nanoscopically Structured Materials: Self-Assembly of Metal Chalcogenide/Metal Oxide Nanostructures Based on the Degree of Pearson Hardness. Chemistry of Materials, 2011, 23, 3534-3539.	6.7	20
53	Two new minerals, badengzhuite, TiP, and zhiqinite, TiSi ₂ , from the Cr-11 chromitite orebody, Luobusa ophiolite, Tibet, China: is this evidence for super-reduced mantle-derived fluids?. European Journal of Mineralogy, 2020, 32, 557-574.	1.3	20
54	Electron Diffraction on Flash-Frozen Cowlesite Reveals the Structure of the First Two-Dimensional Natural Zeolite. ACS Central Science, 2020, 6, 1578-1586.	11.3	18

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55	Silicatein-mediated incorporation of titanium into spicules from the demosponge Suberites domuncula. Cell and Tissue Research, 2010, 339, 429-436.	2.9	17
56	A multi-technique, micrometer- to atomic-scale description of a synthetic analogue of chukanovite, Fe2(CO3)(OH)2. European Journal of Mineralogy, 2014, 26, 221-229.	1.3	17
57	Automated diffraction tomography combined with electron precession: a new tool for ab initio nanostructure analysis. Materials Research Society Symposia Proceedings, 2009, 1184, 38.	0.1	16
58	Electron diffraction, X-ray powder diffraction and pair-distribution-function analyses to determine the crystal structures of Pigment Yellow 213, C ₂₃ H ₂₁ N ₅ O ₉ . Acta Crystallographica Section B: Structural Science, 2009, 65, 189-199.	1.8	16
59	Synthesis of Hierarchically Grown ZnO@NT-WS ₂ Nanocomposites. Chemistry of Materials, 2009, 21, 5382-5387.	6.7	16
60	Structure solution of zeolites by automated electron diffraction tomography – Impact and treatment of preferential orientation. Microporous and Mesoporous Materials, 2014, 189, 107-114.	4.4	16
61	Cs ₃ Cu ₄ In ₂ Cl ₁₃ Nanocrystals: A Perovskite-Related Structure with Inorganic Clusters at A Sites. Inorganic Chemistry, 2020, 59, 548-554.	4.0	16
62	Cronstedtite polytypes in the Paris meteorite. European Journal of Mineralogy, 2018, 30, 349-354.	1.3	16
63	Effect of pressure on the properties of a NASICON Li _{1.3} Al _{0.3} Ti _{1.7} (PO ₄) ₃ nanofiber solid electrolyte. Journal of Materials Chemistry A, 2021, 9, 13688-13696.	10.3	15
64	Structure determination, thermal stability and dissolution rate of \hat{l} -indomethacin. International Journal of Pharmaceutics, 2021, 608, 121067.	5.2	15
65	Mismatch Strain versus Dangling Bonds: Formation of "Coinâ€Roll Nanowires―by Stacking Nanosheets. Angewandte Chemie - International Edition, 2010, 49, 3301-3305.	13.8	14
66	Structure analysis of materials at the order–disorder borderline using three-dimensional electron diffraction. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2019, 75, 550-563.	1.1	14
67	Ba6P12N17O9Br3 - A Column-Type Phosphate Structure Solved from Single-Nanocrystal Data Obtained by Automated Electron Diffraction Tomography. European Journal of Inorganic Chemistry, 2012, 2012, 121-125.	2.0	13
68	Application of \hat{l} recycling to electron automated diffraction tomography data from inorganic crystalline nanovolumes. Acta Crystallographica Section A: Foundations and Advances, 2013, 69, 396-407.	0.3	13
69	Atomic structure solution of the complex quasicrystal approximant Al ₇₇ Rh ₁₅ Ru ₈ from electron diffraction data. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2014, 70, 999-1005.	1.1	13
70	What is the actual structure of samarskite-(Y)? A TEM investigation of metamict samarskite from the Garnet Codera dike pegmatite (Central Italian Alps). American Mineralogist, 2016, 101, 1679-1690.	1.9	13
71	Structural analysis of metastable pharmaceutical loratadine form II, by 3D electron diffraction and DFT+D energy minimisation. CrystEngComm, 2020, 22, 7490-7499.	2.6	13
72	Hierarchical composition of the axial filament from spicules of the siliceous sponge Suberites domuncula: from biosilica-synthesizing nanofibrils to structure- and morphology-guiding triangular stems. Cell and Tissue Research, 2013, 351, 49-58.	2.9	12

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73	(Na,â-¡) ₅ [MnO ₂] ₁₃ nanorods: a new tunnel structure for electrode materials determined <i>ab initio</i> and refined through a combination of electron and synchrotron diffraction data. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2016, 72, 893-903.	1.1	12
74	Structure characterization of nanocrystalline porous materials by tomographic electron diffraction. Zeitschrift Fur Kristallographie - Crystalline Materials, 2015, 230, 271-288.	0.8	11
75	The Crystal Structure of Orthocetamol Solved by 3D Electron Diffraction. Angewandte Chemie, 2019, 131, 11035-11038.	2.0	11
76	Jingsuiite, TiB2, a new mineral from the Cr-11 podiform chromitite orebody, Luobusa ophiolite, Tibet, China: Implications for recycling of boron. American Mineralogist, 2022, 107, 43-53.	1.9	10
77	Crystal Structure of Linagliptin Hemihydrate Hemiethanolate (C25H28N8O2)2(H2O)(C2H5OH) from 3D Electron Diffraction Data, Rietveld Refinement, and Density Functional Theory Optimization. Crystal Growth and Design, 2021, 21, 2019-2027.	3.0	10
78	3D Electron Diffraction Structure Determination of Terrylene, a Promising Candidate for Intermolecular Singlet Fission. ChemPhysChem, 2021, 22, 1631-1637.	2.1	10
79	Synthesis of a quenchable high-pressure form of magnetite (h-Fe3O4) with composition Fe1(Fe2+0.75Mg0.26)Fe2(Fe3+0.70Cr0.15Al0.11Si0.04)2O4. American Mineralogist, 2014, 99, 2405-2415.	1.9	9
80	Evidence for subsolidus quartz-coesite transformation in impact ejecta from the Australasian tektite strewn field. Geochimica Et Cosmochimica Acta, 2019, 264, 105-117.	3.9	9
81	Racemic Conglomerate Formation via Crystallization of Metaxalone from Volatile Deep Eutectic Solvents. Crystal Growth and Design, 2020, 20, 4731-4739.	3.0	9
82	The structure of kaliophilite KAlSiO ₄ , a long-lasting crystallographic problem. IUCrJ, 2020, 7, 1070-1083.	2.2	9
83	Structure characterization of hard materials by precession electron diffraction and automatic diffraction tomography: 6H–SiC semiconductor and Ni _{1+<i>x</i>} Te ₁ embedded nanodomains. Semiconductor Science and Technology, 2012, 27, 105003.	2.0	8
84	Crystal structure determination of karibibite, an Fe3+ arsenite, using electron diffraction tomography. Mineralogical Magazine, 2017, 81, 1191-1202.	1.4	8
85	A structural study of cyanotrichite from Dachang by conventional and automated electron diffraction. Physics and Chemistry of Minerals, 2015, 42, 651-661.	0.8	7
86	Snapshots of the Formation of NaTi ₃ O ₆ (OH)·2H ₂ O Nanowires: A Timeâ€Resolved XRD/HRTEM Study. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2013, 639, 2521-2526.	1.2	6
87	Closing the gap between electron and X-ray crystallography. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2015, 71, 737-739.	1.1	6
88	Single nano crystal analysis using automated electron diffraction tomography. Rendiconti Lincei, 2015, 26, 211-223.	2.2	6
89	Structural insights into <i>M</i> ₂ Oâ€"Al ₂ O ₃ â€"WO ₃ (<i>M</i> = Na, K) system by electron diffraction tomography. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials. 2015. 71, 349-357.	1.1	6
90	A pilot study to test the reliability of the ERT method in the identification of mixed sulphides bearing dykes: The example of Sidi Flah mine (Anti-Atlas, Morocco). Ore Geology Reviews, 2018, 101, 819-838.	2.7	5

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91	Daliranite, PbHgAs ₂ S ₅ : determination of the incommensurately modulated structure and revision of the chemical formula. Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2019, 75, 711-716.	1.1	5
92	Heterogeneity of nano-sized zeolite crystals. Microporous and Mesoporous Materials, 2020, 294, 109897.	4.4	5
93	Novel TEM Microscopy and Electron Diffraction Techniques to Characterize Cultural Heritage Materials: From Ancient Greek Artefacts to Maya Mural Paintings. Scanning, 2019, 2019, 1-13.	1.5	4
94	The Effect of the Starting Mineralogical Mixture on the Nature of Fe-Serpentines Obtained during Hydrothermal Synthesis AT 90°C. Clays and Clay Minerals, 2020, 68, 394-412.	1.3	4
95	MZ-35, a new layered pentasil borosilicate synthesized in the presence of large alkali cations. Microporous and Mesoporous Materials, 2014, 189, 64-70.	4.4	3
96	Rational assembly and dual functionalization of Au@MnO heteroparticles on TiO ₂ nanowires. New Journal of Chemistry, 2014, 38, 2031-2036.	2.8	3
97	Raman, FT-IR spectroscopy and morphology of carbon dust from carbon arc in liquid benzene. Fullerenes Nanotubes and Carbon Nanostructures, 2018, 26, 654-660.	2.1	3
98	"Ab-Initio―Structure Solution of Nano-Crystalline Minerals and Synthetic Materials by Automated Electron Tomography. , 2011, , 41-54.		2
99	Structure analysis on the nanoscale: closed WS2 nanoboxes through a cascade of topo- and epitactic processes. CrystEngComm, 2014, 16, 5087-5092.	2.6	2
100	3D electron diffraction study of terrestrial iron oxide alteration in the Mineo pallasite. Mineralogical Magazine, 2022, 86, 272-281.	1.4	2
101	Structural characterization of the of inorganic and organic hydrotalcites. Acta Crystallographica Section A: Foundations and Advances, 2014, 70, C238-C238.	0.1	1
102	Two New Organic Co-Crystals Based on Acetamidophenol Molecules. Symmetry, 2022, 14, 431.	2.2	1
103	Electron Diffraction Reinvestigation of CdCr ₂ Se ₄ and ZnCr _{2-x} V _x Se ₄ Spinel Structures. Solid State Phenomena, 0, 203-204, 262-265.	0.3	0
104	6. Investigation of bio-related minerals by electron-diffraction tomography: Vaterite, dental hydroxyapatite, and crystalline nanorods in sponge primmorphs. , 2015, , 149-168.		0
105	Submicrometer yttrian zircon coating and arborescent aeschynite microcrystals on truncated bipyramidal anatase: An electron microscopy study of miarolitic cavities in the Cuasso al Monte granophyre (Varese, Italy). American Mineralogist, 2018, 103, 480-488.	1.9	0
106	Titania-decorated hybrid nano-architectures and their preliminary assessment in catalytic applications. Nano Structures Nano Objects, 2021, 28, 100788.	3.5	0
107	Charoite, as an Example of a Structure with Natural Nanotubes. , 2011, , 55-60.		0
108	Structural study of decrespignyite-(Y), a complex yttrium rare earth copper carbonate chloride, by three-dimensional electron and synchrotron powder diffraction. European Journal of Mineralogy, 2020, 32, 545-555.	1.3	0

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