

# Ilie Hanzu

## List of Publications by Year in descending order

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62  
papers

2,115  
citations

257450

24  
h-index

233421

45  
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65  
all docs

65  
docs citations

65  
times ranked

2970  
citing authors

#	ARTICLE	IF	CITATIONS
1	Alternative Li-Ion Battery Electrode Based on Self-Organized Titania Nanotubes. <i>Chemistry of Materials</i> , 2009, 21, 63-67.	6.7	320
2	TiO <sub>2</sub> nanotubes manufactured by anodization of Ti thin films for on-chip Li-ion 2D microbatteries. <i>Electrochimica Acta</i> , 2009, 54, 4262-4268.	5.2	137
3	Substitutional disorder: structure and ion dynamics of the argyrodites Li <sub>6</sub> PS <sub>5</sub> Cl, Li <sub>6</sub> PS <sub>5</sub> Br and Li <sub>6</sub> PS <sub>5</sub> I. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 8489-8507.	2.8	133
4	Nanoarchitected TiO <sub>2</sub> /SnO: A Future Negative Electrode for High Power Density Li-Ion Microbatteries?. <i>Chemistry of Materials</i> , 2010, 22, 1926-1932.	6.7	107
5	Short-range Li diffusion vs. long-range ionic conduction in nanocrystalline lithium peroxide Li <sub>2</sub> O <sub>2</sub> the discharge product in lithium-air batteries. <i>Energy and Environmental Science</i> , 2014, 7, 2739-2752.	30.8	104
6	Nanostructured negative electrodes based on titania for Li-ion microbatteries. <i>Journal of Materials Chemistry</i> , 2011, 21, 9925.	6.7	103
7	An Electrolyte for Reversible Cycling of Sodium Metal and Intercalation Compounds. <i>ChemSusChem</i> , 2017, 10, 401-408.	6.8	89
8	A novel architected negative electrode based on titania nanotube and iron oxide nanowire composites for Li-ion microbatteries. <i>Journal of Materials Chemistry</i> , 2010, 20, 4041.	6.7	88
9	Order vs. disorder a huge increase in ionic conductivity of nanocrystalline LiAlO <sub>2</sub> embedded in an amorphous-like matrix of lithium aluminate. <i>Journal of Materials Chemistry A</i> , 2014, 2, 20295-20306.	10.3	79
10	“Ionic liquids-in-salt” a promising electrolyte concept for high-temperature lithium batteries?. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 12341-12349.	2.8	76
11	Untangling the Structure and Dynamics of Lithium-Rich Anti-Perovskites Envisaged as Solid Electrolytes for Batteries. <i>Chemistry of Materials</i> , 2018, 30, 8134-8144.	6.7	70
12	Electrical and Point Defect Properties of TiO <sub>2</sub> Nanotubes Fabricated by Electrochemical Anodization. <i>Journal of Physical Chemistry C</i> , 2011, 115, 5989-5996.	3.1	64
13	Solid Electrolytes: Extremely Fast Charge Carriers in Garnet-Type Li <sub>6</sub> La <sub>3</sub> ZrTaO <sub>12</sub> Single Crystals. <i>Annalen Der Physik</i> , 2017, 529, 1700140.	2.4	60
14	Electrochemical fabrication of Sn nanowires on titania nanotube guide layers. <i>Nanotechnology</i> , 2008, 19, 205601.	2.6	38
15	Mechanistic Study of Sn Electrodeposition on TiO <sub>2</sub> Nanotube Layers: Thermodynamics, Kinetics, Nucleation, and Growth Modes. <i>Journal of Physical Chemistry C</i> , 2009, 113, 20568-20575.	3.1	38
16	Aging of Tesla's 18650 Lithium-Ion Cells: Correlating Solid-Electrolyte-Interphase Evolution with Fading in Capacity and Power. <i>Journal of the Electrochemical Society</i> , 2017, 164, A3503-A3510.	2.9	38
17	Nanocomposite Electrode for Li-Ion Microbatteries Based on SnO on Nanotubular Titania Matrix. <i>Electrochemical and Solid-State Letters</i> , 2009, 12, A186.	2.2	37
18	Bulk and grain-boundary ionic conductivity in sodium zirconophosphosilicate Na <sub>3</sub> Zr <sub>2</sub> (SiO <sub>4</sub> ) <sub>2</sub> PO <sub>4</sub> (NASICON). <i>Chemical Physics Letters</i> , 2018, 701, 147-150.	2.6	37

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19	The Electronic Conductivity of Single Crystalline Ga <sup>3+</sup> -Stabilized Cubic Li <sub>7</sub> La <sub>3</sub> Zr <sub>2</sub> O <sub>12</sub> : A Technologically Relevant Parameter for All-Solid-State Batteries. <i>Advanced Materials Interfaces</i> , 2020, 7, 2000450.	3.7	33
20	Electrochemical fabrication of tin nanowires: A short review. <i>Comptes Rendus Chimie</i> , 2008, 11, 995-1003.	0.5	31
21	Nuclear Spin Relaxation in Nanocrystalline <sup>67</sup> Li <sub>3</sub> PS <sub>4</sub> Reveals Low-Dimensional Li Diffusion in an Isotropic Matrix. <i>Chemistry of Materials</i> , 2018, 30, 7575-7586.	6.7	29
22	Safety assessment of electrically cycled cells at high temperatures under mechanical crush loads. <i>Transportation</i> , 2020, 6, 100087.	14.8	29
23	Analytical Dissection of an Automotive Li-Ion Pouch Cell. <i>Batteries</i> , 2019, 5, 67.	4.5	26
24	Long-Cycle-Life Na-Ion Anodes Based on Amorphous Titania Nanotubes Interfaces and Diffusion. <i>ACS Applied Materials &amp; Interfaces</i> , 2015, 7, 25757-25769.	8.0	25
25	Nanostructured Ceramics: Ionic Transport and Electrochemical Activity. <i>Zeitschrift Fur Physikalische Chemie</i> , 2017, 231, 1361-1405.	2.8	25
26	Li ion dynamics in TiO <sub>2</sub> anode materials with an ordered hierarchical pore structure – insights from ex situ NMR. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 1894-1901.	2.8	24
27	Myth and Reality about the Origin of Inductive Loops in Impedance Spectra of Lithium-Ion Electrodes – A Critical Experimental Approach. <i>Electrochimica Acta</i> , 2016, 207, 218-223.	5.2	24
28	High Li <sup>+</sup> and Na <sup>+</sup> Conductivity in New Hybrid Solid Electrolytes based on the Porous MIL-121 Metal Organic Framework. <i>Advanced Energy Materials</i> , 2021, 11, 2003542.	19.5	24
29	Fast Na ion transport triggered by rapid ion exchange on local length scales. <i>Scientific Reports</i> , 2018, 8, 11970.	3.3	22
30	Heterogeneous F <sup>-</sup> anion transport, local dynamics and electrochemical stability of nanocrystalline La <sup>3+</sup> Ba <sub>3</sub> F <sub>3</sub> . <i>Energy Storage Materials</i> , 2019, 16, 481-490.	18.0	20
31	Spatial confinement – rapid 2D F <sup>-</sup> diffusion in micro- and nanocrystalline RbSn <sub>2</sub> F <sub>5</sub> . <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 1872-1883.	2.8	15
32	Glass in Two Forms: Heterogeneous Electrical Relaxation in Nanoglassy Petalite. <i>Journal of Physical Chemistry C</i> , 2019, 123, 10153-10162.	3.1	14
33	New Solar Cell–Battery Hybrid Energy System: Integrating Organic Photovoltaics with Li-Ion and Na-Ion Technologies. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 19155-19168.	6.7	14
34	Conductor–Insulator Interfaces in Solid Electrolytes: A Design Strategy to Enhance Li-Ion Dynamics in Nanoconfined LiBH <sub>4</sub> /Al <sub>2</sub> O <sub>3</sub> . <i>Journal of Physical Chemistry C</i> , 2021, 125, 15052-15060.	3.1	14
35	Fluoride-Ion Batteries: On the Electrochemical Stability of Nanocrystalline La <sub>0.9</sub> Ba <sub>0.1</sub> F <sub>2.9</sub> against Metal Electrodes. <i>Nanomaterials</i> , 2019, 9, 1517.	4.1	11
36	Analysis and Investigation of Thermal Runaway Propagation for a Mechanically Constrained Lithium-Ion Pouch Cell Module. <i>Batteries</i> , 2021, 7, 49.	4.5	11

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37	Lithium barrier materials for on-chip Si-based microbatteries. Journal of Materials Science: Materials in Electronics, 2017, 28, 14605-14614.	2.2	10
38	Fluorine Translational Anion Dynamics in Nanocrystalline Ceramics: SrF <sub>2</sub> -YF <sub>3</sub> Solid Solutions. Crystals, 2018, 8, 122.	2.2	10
39	Novel fabrication technologies of 1D TiO <sub>2</sub> nanotubes, vertical tin and iron-based nanowires for Li-ion microbatteries. International Journal of Nanotechnology, 2012, 9, 260.	0.2	9
40	In situ study of electrochromic properties of self-assembled TiO <sub>2</sub> nanotubes. Comptes Rendus Chimie, 2013, 16, 96-102.	0.5	8
41	Redox processes in sodium vanadium phosphate cathodes – insights from <i>operando</i> magnetometry. Physical Chemistry Chemical Physics, 2019, 21, 20151-20155.	2.8	8
42	Synthesis of a tetrazine–quaterthiophene copolymer and its optical, structural and photovoltaic properties. Journal of Materials Science, 2019, 54, 10065-10076.	3.7	8
43	Influence of defects on ionic transport in LiTaO <sub>3</sub> – A study using EXAFS and positron annihilation lifetime spectroscopy. Solid State Ionics, 2020, 352, 115355.	2.7	8
44	The Origins of Ion Conductivity in MOF-Ionic Liquids Hybrid Solid Electrolytes. Frontiers in Energy Research, 2021, 9, .	2.3	8
45	Insulator:conductor interfacial regions – Li ion dynamics in the nanocrystalline dispersed ionic conductor LiF:TiO <sub>2</sub> . Solid State Ionics, 2021, 369, 115726.	2.7	7
46	Electrical and Proton Conduction Properties of Amorphous TiO <sub>2</sub> Nanotubes Fabricated by Electrochemical Anodization. ECS Transactions, 2011, 35, 21-31.	0.5	6
47	Partial electronic conductivity of nanocrystalline Na <sub>2</sub> O <sub>2</sub> . Materials Research Express, 2017, 4, 075508.	1.6	6
48	Ion dynamics in a new class of materials: nanoglassy lithium aluminosilicates. Materials Research Express, 2018, 5, 035202.	1.6	5
49	Evaluation of carboxylic, phosphonic, and sulfonic acid protogenic moieties on tunable poly( <i>meta</i> -phenylene oxide) ionomer scaffolds. Journal of Polymer Science Part A, 2019, 57, 2209-2213.	2.3	5
50	A pyrrolopyridazinedione-based copolymer for fullerene-free organic solar cells. New Journal of Chemistry, 2021, 45, 1001-1009.	2.8	3
51	Electrochemical preparation of tin–titania nanocomposite arrays. RSC Advances, 2016, 6, 98243-98247.	3.6	1
52	Electrochemical properties of arylsilanes. Electrochemistry Communications, 2019, 102, 13-18.	4.7	1
53	Hybrid Solid–Electrolytes: High Li <sup>+</sup> and Na <sup>+</sup> Conductivity in New Hybrid Solid Electrolytes based on the Porous MIL-121 Metal Organic Framework (Adv. Energy Mater. 16/2021). Advanced Energy Materials, 2021, 11, 2170060.	19.5	1
54	Fast Na Ion Transport Triggered By Rapid Ion Exchange on Local Length Scales. SSRN Electronic Journal, 0, , .	0.4	1

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55	Nanostructured TiO <sub>2</sub> Materials for New-Generation Li-Ion Batteries. , 2011, , 183-236.		0
56	Interface Storage and Diffusion in Titania-Based Na-Ion Battery Negative Electrodes. ECS Meeting Abstracts, 2016, , .	0.0	0
57	Electrochemical Investigations on Arylsilicon and Aryltin Hydrides and Their Resulting Polymers. ECS Meeting Abstracts, 2017, , .	0.0	0
58	A Highly Concentrated Ether Electrolyte for Efficient Na-Ion Half Cells. ECS Meeting Abstracts, 2017, , .	0.0	0
59	Nanostructured TiO <sub>2</sub> Materials for New-Generation Li-Ion Batteries. , 2017, , 171-221.		0
60	Electronic and Ionic Conductivity of Nanocrystalline Sodium Peroxide. ECS Meeting Abstracts, 2018, , .	0.0	0
61	Towards a Solar-Cell Battery Hybrid System. ECS Meeting Abstracts, 2018, , .	0.0	0
62	Go in and Go out " Change in Local Structure and Diffusivity in Monoclinic Li <sub>3</sub> +X V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> upon Li Insertion and Extraction. ECS Meeting Abstracts, 2018, , .	0.0	0