

Etienne Janod

List of Publications by Year in descending order

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104
papers

2,349
citations

236612

25
h-index

223531

46
g-index

113
all docs

113
docs citations

113
times ranked

2782
citing authors

#	ARTICLE	IF	CITATIONS
1	A Leakyâ€Integralâ€andâ€Fire Neuron Analog Realized with a Mott Insulator. Advanced Functional Materials, 2017, 27, 1604740.	7.8	186
2	Coherent long-range magnetic bound states in a superconductor. Nature Physics, 2015, 11, 1013-1016.	6.5	155
3	Resistive Switching in Mott Insulators and Correlated Systems. Advanced Functional Materials, 2015, 25, 6287-6305.	7.8	130
4	Electricâ€Fieldâ€Induced Resistive Switching in a Family of Mott Insulators: Towards a New Class of RRAM Memories. Advanced Materials, 2010, 22, 5193-5197.	11.1	125
5	Universal Electricâ€Fieldâ€Driven Resistive Transition in Narrowâ€Gap Mott Insulators. Advanced Materials, 2013, 25, 3222-3226.	11.1	114
6	Structure and Magnetic Properties of Oxychalcogenides $A_{2-x}F_{2-x}Q_2O_2$ ($A = Sr, Ba; Q = S, Se$) with FeO Square Planar Layers Representing an Antiferromagnetic Checkerboard Spin Lattice. Journal of the American Chemical Society, 2008, 130, 8261-8270.	6.6	105
7	Avalanche breakdown in $GaTa_4Se_8$ narrow-gap Mott insulators. Nature Communications, 2013, 4, 1722.	5.8	100
8	Electricâ€Pulseâ€Driven Electronic Phase Separation, Insulatorâ€Metal Transition, and Possible Superconductivity in a Mott Insulator. Advanced Materials, 2008, 20, 2760-2765.	11.1	70
9	Resistive Switching at the Nanoscale in the Mott Insulator Compound $GaTa_4Se_8$. Nano Letters, 2013, 13, 3648-3653.	4.5	62
10	Ultrafast Formation of a Charge Density Wave State in $GaTa_4Se_8$: Observation at Nanometer Scales Using Time-Resolved X-Ray Diffraction. Physical Review Letters, 2017, 118, 247401.	2.9	60
11	Half-Metallic Ferromagnetism and Large Negative Magnetoresistance in the New Lacunar Spinel $GaTi_3VS_8$. Journal of the American Chemical Society, 2010, 132, 5704-5710.	6.6	55
12	First-Order Insulator-to-Metal Mott Transition in the Paramagnetic 3D System $GaTa_4Se_8$. Physical Review Letters, 2014, 113, 086404.	2.9	52
13	Orbital-Ordering-Driven Multiferroicity and Magnetoelectric Coupling in GaV_4S_8 . Physical Review Letters, 2014, 113, 127602.	2.9	51
14	Optical Conductivity Measurements of $GaTa_4Se_8$ High Pressure: Evidence of a Bandwidth-Controlled Insulator-to-Metal Mott Transition. Physical Review Letters, 2013, 110, 037401.	2.9	49
15	Reversible magnetization below T_c in high-quality superconducting ceramics. Physica C: Superconductivity and Its Applications, 1994, 224, 263-276.	0.6	44
16	Nonthermal and purely electronic resistive switching in a Mott memory. Physical Review B, 2014, 90, .	1.1	44
17	Split superconducting transitions in the specific heat and magnetic susceptibility of $YBa_2Cu_3O_x$ versus oxygen content. Physica C: Superconductivity and Its Applications, 1993, 216, 129-139.	0.6	39
18	Incommensurate spin correlation driven by frustration in $BiCu_2PO_6$. Physical Review B, 2009, 80, .	1.1	36

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19	Different threshold and bipolar resistive switching mechanisms in reactively sputtered amorphous undoped and Cr-doped vanadium oxide thin films. <i>Journal of Applied Physics</i> , 2018, 123, .	1.1	33
20	How a dc Electric Field Drives Mott Insulators Out of Equilibrium. <i>Physical Review Letters</i> , 2018, 121, 016601.	2.9	33
21	Large Magnetic Entropy in Giant Magnetoresistive Amorphous Gadolinium Silicon. <i>Physical Review Letters</i> , 1999, 83, 2266-2269.	2.9	30
22	Direct experimental observation of the molecular $J \text{ eff } \approx \frac{3}{2}$ ground state in the lacunar spinel GaTa_4Se_8 . <i>Nature Communications</i> , 2017, 8, 782.	5.8	30
23	Strain wave pathway to semiconductor-to-metal transition revealed by time-resolved X-ray powder diffraction. <i>Nature Communications</i> , 2021, 12, 1239.	5.8	29
24	Electric-pulse-induced resistive switching and possible superconductivity in the Mott insulator GaTa_4Se_8 . <i>Microelectronic Engineering</i> , 2008, 85, 2430-2433.	1.1	28
25	Control of the Electronic Properties and Resistive Switching in the New Series of Mott Insulators $\text{GaTa}_{4-x}\text{Se}_8\text{Te}_x$ ($0 \leq x \leq 6.5$). <i>Chemistry of Materials</i> , 2011, 23, 2611-2618.	3.2	28
26	Metal-Metal Bonding and Correlated Metallic Behavior in the New Deficient Spinel $\text{Ga}_{0.87}\text{Ti}_4\text{S}_8$. <i>Chemistry of Materials</i> , 2008, 20, 2382-2387.	3.2	27
27	A flavoprotein supports cell wall properties in the necrotrophic fungus <i>Alternaria brassicicola</i> . <i>Fungal Biology and Biotechnology</i> , 2017, 4, 1.	2.5	25
28	Mott insulators: A large class of materials for Leaky Integrate and Fire (LIF) artificial neuron. <i>Journal of Applied Physics</i> , 2018, 124, .	1.1	24
29	Specific heat up to 14 tesla of a $\text{YBa}_2\text{Cu}_3\text{O}_{6.92}$ single crystal. <i>Physica C: Superconductivity and Its Applications</i> , 1994, 234, 269-279.	0.6	23
30	Crystal structure and charge order below the metal-insulator transition in the vanadium bronze $\text{Pr}_2\text{-SrV}_6\text{O}_{15}$. <i>Solid State Sciences</i> , 2003, 5, 591-599.	1.5	23
31	Electric-Field-Assisted Nanostructuring of a Mott Insulator. <i>Advanced Functional Materials</i> , 2009, 19, 2800-2804.	7.8	23
32	First evidence of resistive switching in polycrystalline GaV_4S_8 thin layers. <i>Physica Status Solidi - Rapid Research Letters</i> , 2011, 5, 53-55.	1.2	23
33	Preparation and superconducting properties of high-quality Bi-2212 ceramics. <i>Journal of Alloys and Compounds</i> , 1994, 209, 225-229.	2.8	21
34	Electrical characterizations of resistive random access memory devices based on GaV_4S_8 thin layers. <i>Thin Solid Films</i> , 2013, 533, 61-65.	0.8	19
35	Evidence of quantum criticality in the doped Haldane system Y_2BaNiO_5 . <i>Physical Review B</i> , 2000, 62, 2998-3001.	1.1	18
36	Control of resistive switching in AM_4Q_8 narrow gap Mott insulators: A first step towards neuromorphic applications. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2015, 212, 239-244.	0.8	18

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37	Metal-insulator transitions in $(V_{1-x}Cr_x)_{2}O_{3}$ thin films deposited by reactive direct current magnetron co-sputtering. <i>Thin Solid Films</i> , 2016, 617, 56-62.	0.8	17
38	Mössbauer characterization of tin dopant ions in the antiferromagnetic ilmenite $MnTiO_{3}$. <i>Solid State Communications</i> , 2003, 125, 341-346.	0.9	16
39	Optical transitions of the quasi-one-dimensional conductor $Sr_{1-x}La_xVO_3$. <i>Physical Review B</i> , 2005, 72, 041101.	1.1	15
40	Resistive Switching Induced by Electric Pulses in a Single-Component Molecular Mott Insulator. <i>Journal of Physical Chemistry C</i> , 2015, 119, 2983-2988.	1.5	15
41	A Topochemical Approach to Synthesize Layered Materials Based on the Redox Reactivity of Anionic Chalcogen Dimers. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 13618-13623.	7.2	15
42	Electric field induced avalanche breakdown and non-volatile resistive switching in the Mott Insulators AM_4Q_8 . <i>European Physical Journal: Special Topics</i> , 2013, 222, 1046-1056.	1.2	14
43	Ultrafast filling of an electronic pseudogap in an incommensurate crystal. <i>Physical Review B</i> , 2013, 87, 040407.	1.1	14
44	X-ray study of femtosecond structural dynamics in the 2D charge density wave compound $1T-TaS_2$. <i>Physica B: Condensed Matter</i> , 2015, 460, 100-104.	1.3	14
45	Relaxation of a Spiking Mott Artificial Neuron. <i>Physical Review Applied</i> , 2018, 10, 044002.	1.5	14
46	Experimental evidence for a spin gap in the $s=1/2$ quantum antiferromagnet $Cu_2(OH)_2CO_3$. <i>Solid State Communications</i> , 2000, 116, 513-518.	0.9	13
47	Optical transitions in the two-leg ladder compounds $A_xV_6O_{15}$ ($A=Sr,Na$). <i>Physical Review B</i> , 2005, 72, 041101.	1.1	13
48	Negative Colossal Magnetoresistance Driven by Carrier Type in the Ferromagnetic Mott Insulator GaV_4S_8 . <i>Chemistry of Materials</i> , 2015, 27, 4398-4404.	3.2	13
49	Design of metastable oxychalcogenide phases by topochemical (de)intercalation of sulfur in $La_2O_2S_2$. <i>Nature Communications</i> , 2021, 12, 3605.	5.8	12
50	Crystal structure and chemical bonding in the mixed anion compound $BaSF$. <i>Dalton Transactions</i> , 2017, 46, 16244-16250.	1.6	11
51	First demonstration of Leaky Integrate and Fire artificial neuron behavior on $(V_{0.95}Cr_{0.05})_2O_3$ thin film. <i>MRS Communications</i> , 2018, 8, 835-841.	0.8	11
52	Specific heat of $YBa_2Cu_3O_{7-\delta}$ ceramics with single and double superconducting transitions in magnetic fields up to 14 T. <i>Physica C: Superconductivity and Its Applications</i> , 1995, 241, 301-310.	0.6	10
53	Self-organized criticality effect on stability: magneto-thermal oscillations in a granular YBCO superconductor. <i>European Physics Letters</i> , 1996, 34, 287-292.	0.7	10
54	Crystallization of quasi-two-dimensional vanadates in the $CaV_2O_3-V_2O_5$ system. <i>Journal of Crystal Growth</i> , 2002, 240, 170-175.	0.7	10

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55	Electric Pulse Induced Resistive Switching in the Narrow Gap Mott Insulator GaMo ₄ S ₈ . Key Engineering Materials, 2014, 617, 135-140.	0.4	10
56	Combined First-Principles Calculations and Experimental Study of the Phonon Modes in the Multiferroic Compound GeV ₄ S ₈ . Journal of Physical Chemistry C, 2017, 121, 3522-3529.	1.5	10
57	Electronic structure of a hole doped oxide with a quasi-1D crystal structure Y _{2-x} (Sr,Ca) _x BaNiO ₅ . Journal of Alloys and Compounds, 2001, 317-318, 149-152.	2.8	9
58	Magnetic study of two isotypic manganese chloro-sulfides: MnSbS ₂ Cl and the new compound MnBiS ₂ Cl. Journal of Solid State Chemistry, 2006, 179, 486-491.	1.4	9
59	Deposition by radio frequency magnetron sputtering of GaV ₄ S ₈ thin films for resistive random access memory application. Thin Solid Films, 2013, 533, 54-60.	0.8	9
60	Non-volatile resistive switching in the Mott insulator (V _{1-x} Cr _x) ₂ O ₃ . Physica B: Condensed Matter, 2018, 536, 327-330.	1.3	9
61	Observation of a specific heat anomaly at the superconducting transition in single-layer cuprate Bi ₂ .12Sr _{1.88} CuO ₆ + δ . Physics Letters, Section A: General, Atomic and Solid State Physics, 1995, 205, 105-111.	0.9	8
62	Random interactions and spin-glass thermodynamic transition in the hole-doped Haldane system Y _{2-x} CaxBaNiO ₅ . Physical Review B, 2001, 63, .	1.1	8
63	Calorimetric study of YBa ₂ Cu ₃ O _{6.92} in very high magnetic field: 27 Tesla. Physica C: Superconductivity and Its Applications, 1994, 235-240, 1763-1764.	0.6	7
64	A dimensional characteristic in the specific heat of high temperature superconductors. Physica C: Superconductivity and Its Applications, 1995, 244, 225-230.	0.6	7
65	Deposition of GaV ₄ S ₈ thin films by H ₂ /Ar reactive sputtering for ReRAM applications. Journal Physics D: Applied Physics, 2014, 47, 065309.	1.3	7
66	Ba ₂ F ₂ Fe _{1.5} Se ₃ : An Intergrowth Compound Containing Iron Selenide Layers. Inorganic Chemistry, 2016, 55, 2923-2928.	1.9	7
67	Unexplored reactivity of (S _n) ²⁺ oligomers with transition metals in low-temperature solid-state reactions. Chemical Communications, 2019, 55, 6189-6192.	2.2	7
68	Competition between V ₂ O ₃ phases deposited by one-step reactive sputtering process on polycrystalline conducting electrode. Thin Solid Films, 2020, 705, 138063.	0.8	7
69	Specific heat and magnetic susceptibility of YBa ₂ Cu ₃ O ₇ at the superconducting transition. Physica B: Condensed Matter, 1994, 194-196, 1495-1496.	1.3	6
70	Anomalous spectral weight in photoemission spectra of the hole-doped Haldane chain Y _{2-x} Sr _x BaNiO ₅ . Physical Review B, 2003, 67, .	1.1	6
71	Polarized reflectivity of $\langle \text{Sr}_{0.17}\text{V}_2\text{O}_5 \rangle$. Physical Review B, 2008, 77, .	1.1	6
72	Double superconducting transitions in YBa ₂ Cu ₃ O _x versus oxygen content. Physica B: Condensed Matter, 1994, 194-196, 1939-1940.	1.3	5

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73	Relation between Thermally Induced Structural Distortions and Electronic Properties of the Layered Misfit Chalcogenide (LaS) _{1.196} VS ₂ . Journal of Physical Chemistry C, 2014, 118, 19273-19279.	1.5	5
74	metallic phase and unconventional superconductivity in GaTa_4 . Physical Review B, 2021, 103, .	1.1	4
75	Magnetisation as a probe of the pairing symmetry in Bi ₂ Sr ₂ CuO ₆ + $\hat{\Gamma}$. Physica C: Superconductivity and Its Applications, 1997, 281, 176-184.	0.6	3
76	Charge dynamics in quasi-one dimensional $\hat{\Gamma}^2$ -Sr _{1/6} V ₂ O ₅ . European Physical Journal B, 2009, 69, 181-186.	0.6	3
77	Thin Layers Obtained by Plasma Process for Emerging Non-Volatile Memory (RRAM) Applications. , 2009, , .		3
78	Solvothermal and mechanochemical intercalation of Cu into La ₂ O ₂ S ₂ enabled by the redox reactivity of (S ₂) ²⁺ pairs. Dalton Transactions, 2021, 50, 12419-12423.	1.6	3
79	Magnetisation study of an optimized single crystal of YBa ₂ Cu ₃ O ₇ $\hat{\Gamma}$. Physica C: Superconductivity and Its Applications, 1994, 235-240, 1555-1556.	0.6	2
80	Unconventional antiferromagnetic correlations of the doped Haldane gapsystem Y ₂ BaNi _{1-x} Zn _x O ₅ . European Physical Journal B, 2002, 25, 39-51.	0.6	2
81	(Invited) Control of Resistive Switching in Mott Memories Based on TiN/AM ₄ Q ₈ /TiN MIM Devices. ECS Transactions, 2017, 75, 3-12.	0.3	2
82	Control of stoichiometry and morphology in polycrystalline V ₂ O ₃ thin films using oxygen buffers. Journal of Materials Science, 2020, 55, 14717-14727.	1.7	2
83	Photoinduced charge density wave phase in 1T-TaS ₂ : growth and coarsening mechanisms. Comptes Rendus Physique, 2021, 22, 139-160.	0.3	2
84	Correlated transition metal oxides and chalcogenides for Mott memories and neuromorphic applications. , 2022, , 307-360.		2
85	Magneto-thermal oscillations in a granular YBCO superconductor. European Physical Journal D, 1996, 46, 1279-1280.	0.4	1
86	Magnetoelastic polarons in the hole-doped quasi-one-dimensional model system Y _{2-x} CaxBaNiO ₅ . Physical Review B, 2004, 70, .	1.1	1
87	Resistive Switching Driven by Electric Field in the Mott Insulators AM ₄ X ₈ (A = Ga, Ge; M= V, Nb, Ta; X =) Tj ETQq1 1 0.784314 rgBT /Cve		1
88	An Artificial Neuron Founded on Resistive Switching of Mott Insulators. , 2017, , .		1
89	A Topochemical Approach to Synthesize Layered Materials Based on the Redox Reactivity of Anionic Chalcogen Dimers. Angewandte Chemie, 2018, 130, 13806-13811.	1.6	1
90	Mott Memory Devices Based on the Mott Insulator (V _{1-x} Crx) ₂ O ₃ . , 2018, , .		1

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91	THz Driven Dynamics in Mott Insulator GaTa_4Se_8 . , 2019, , .		1
92	Artificial Electro-Optical Neuron Integrating Hot Electrons in a Mott Insulator. <i>Physical Review Applied</i> , 2022, 17, .	1.5	1
93	Shifting photo-stationary light-induced excited spin state trapping equilibrium towards higher temperature by increasing light fluence. <i>Chemical Physics Letters</i> , 2022, 791, 139395.	1.2	1
94	Photoemission spectroscopy study of the hole-doped Haldane chain $\text{Y}_2\text{Ba}_x\text{Sr}_{1-x}\text{BaNiO}_5$. <i>Nuclear Instruments & Methods in Physics Research B</i> , 2003, 200, 242-247.	0.6	0
95	Crystal Structure and Charge Order Below the Metal-Insulator Transition in the Vanadium Bronze $\text{Pr}_2\text{-SrV}_6\text{O}_{15}$. <i>ChemInform</i> , 2003, 34, no.	0.1	0
96	Neutrons, sciences and perspectives. <i>European Physical Journal: Special Topics</i> , 2012, 213, 1-3.	1.2	0
97	Mott-memories Based on the Narrow Gap Mott Insulators AM_4Q_8 (A=Ga, Ge ; M = V, Nb, Ta ; Q = S, Se). <i>Materials Research Society Symposia Proceedings</i> , 2013, 1562, 1.	0.1	0
98	From Resistive Switching Mechanisms in AM_4Q_8 Mott Insulators to Mott Memories. , 2015, , .		0
99	Mapping metal/insulator nanodomains switching in V_2O_3 by variable-temperature electron spectromicroscopy investigations. <i>Microscopy and Microanalysis</i> , 2021, 27, 1482-1485.	0.2	0
100	X-ray study of femtosecond structural dynamics of the charge-density wave compound 1T-TaS_2 . <i>Acta Crystallographica Section A: Foundations and Advances</i> , 2016, 72, s143-s143.	0.0	0
101	Unusually long carrier lifetime in a Mott insulator revealed by time-resolved Photoemission Electron Microscopy. , 2020, , .		0
102	Hot carriers generation and resistive switching induced by electric and light pulses in the Mott insulator GaTa_4Se_8 (Conference Presentation). , 2020, , .		0
103	Probing and Mapping the Dynamics of Metal/Insulator Nanodomains Switching in V_2O_3 by Cryo-Spectromicroscopy Techniques. <i>Microscopy and Microanalysis</i> , 2021, 27, 67-68.	0.2	0
104	Nanoprobe study of the electric field driven insulator-to-metal transition in GaMo_4S_8 . <i>Journal of Physics: Conference Series</i> , 2022, 2164, 012046.	0.3	0