

Michael Stavola

List of Publications by Year in descending order

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54
papers

1,884
citations

304743

22
h-index

254184

43
g-index

55
all docs

55
docs citations

55
times ranked

1118
citing authors

#	ARTICLE	IF	CITATIONS
1	Hydrogen in Crystalline Semiconductors. Springer Series in Materials Science, 1992, , .	0.6	552
2	Hydrogen local modes and shallow donors in ZnO. Physical Review B, 2005, 72, .	3.2	154
3	“Hidden hydrogen” in as-grown ZnO. Applied Physics Letters, 2004, 85, 5601-5603.	3.3	141
4	Structure and vibrational properties of the dominant O-H center in $\hat{\Gamma}^2$ -Ga ₂ O ₃ . Applied Physics Letters, 2018, 112, .	3.3	83
5	Editors' Choice “Hydrogen Centers in $\hat{\Gamma}^2$ -Ga ₂ O ₃ : Infrared Spectroscopy and Density Functional Theory. ECS Journal of Solid State Science and Technology, 2019, 8, Q3103-Q3110.	1.8	55
6	Hydrogen-decorated lattice defects in proton implanted GaN. Applied Physics Letters, 1998, 72, 1703-1705.	3.3	54
7	Structure and dynamics of the Be-H complex in GaAs. Physical Review B, 1989, 39, 8051-8054.	3.2	53
8	Key to Understanding Interstitial H ₂ in Si. Physical Review Letters, 2002, 88, 105507.	7.8	53
9	Identification of an OH-Li center in ZnO: Infrared absorption spectroscopy and density functional theory. Physical Review B, 2006, 73, .	3.2	46
10	Passivation of shallow impurities in Si by annealing in H ₂ at high temperature. Applied Physics Letters, 1991, 59, 2121-2123.	3.3	44
11	Tutorial: Novel properties of defects in semiconductors revealed by their vibrational spectra. Journal of Applied Physics, 2018, 123, .	2.5	41
12	Pt-H complexes in Si: Complementary studies by vibrational and capacitance spectroscopies. Physical Review B, 2001, 65, .	3.2	37
13	Chapter 3 Vibrational Spectroscopy of Light Element Impurities in Semiconductors. Semiconductors and Semimetals, 1999, 51, 153-224.	0.7	34
14	Concentration and penetration depth of H introduced into crystalline Si by hydrogenation methods used to fabricate solar cells. Journal of Applied Physics, 2006, 100, 093517.	2.5	34
15	Hydrogen centers and the conductivity of crystalline Si $I \propto n \times O_2$	3.2	34
16	Hydrogen impurities and shallow donors in SnO ₂ studied by infrared spectroscopy. Physical Review B, 2011, 84, .	3.2	33
17	The 3942-cm ⁻¹ optical band in irradiated silicon. Physical Review B, 1987, 35, 2755-2766.	3.2	30
18	Symmetry of Molecular H ₂ in Si from a Uniaxial Stress Study of the 3618.4-cm ⁻¹ Vibrational Line. Physical Review Letters, 1999, 83, 1351-1354.	7.8	28

#	ARTICLE	IF	CITATIONS
19	Rotation of Molecular Hydrogen in Si: Unambiguous Identification of Ortho-H ₂ and Para-D ₂ . Physical Review Letters, 2002, 88, 245503.	7.8	26
20	Ortho-para transition of interstitial H ₂ and D ₂ in Si. Physical Review B, 2009, 80, .	3.2	24
21	Ortho and para H ₂ complexes in silicon. Physical Review B, 2002, 65, .	3.2	23
22	Small polaron characteristics of an OD center in TiO ₂ studied by infrared spectroscopy. Physical Review B, 2012, 86, .	3.2	23
23	Dynamics of interstitial H ₂ in crystalline silicon. Physical Review B, 2002, 66, .	3.2	21
24	Structure and vibrational properties of H ₂ complexes in GaAs:N. Physical Review B, 2005, 72, .	3.2	21
25	Interstitial H ₂ in Si: are all problems solved?. Physica B: Condensed Matter, 2003, 340-342, 58-66.	2.7	18
26	Sn-H Complex in Hydrogen Passivated GaAs. Materials Research Society Symposia Proceedings, 1989, 163, 477.	0.1	17
27	Temperature dependence of the vibrational spectrum of a Li-OH complex in ZnO: Infrared absorption experiments and theory. Physical Review B, 2006, 73, .	3.2	15
28	Trapping of multiple H atoms at the Ga(1) vacancy in $\hat{\Gamma}^2$ -Ga ₂ O ₃ . Applied Physics Letters, 2020, 117, .	3.3	14
29	OH-Si complex in hydrogenated n-type $\hat{\Gamma}^2$ -Ga ₂ O ₃ :Si. Applied Physics Letters, 2021, 119, .	3.3	14
30	Interaction of hydrogen with carbon in multicrystalline Si solar-cell materials. Journal of Applied Physics, 2011, 109, 053517.	2.5	13
31	Symmetry and diffusivity of the interstitial hydrogen shallow-donor center in In ₂ O ₃ . Applied Physics Letters, 2016, 109, .	3.3	12
32	Hydrogen in Semiconductors: Crystal growth and device processing. Advanced Materials, 1992, 4, 332-340.	21.0	11
33	Rotational-vibrational transitions of interstitial HD in Si. Physical Review B, 2005, 72, .	3.2	11
34	Determination of dielectric axes and transition moment directions in $\hat{\Gamma}^2$ -Ga ₂ O ₃ from the polarization dependence of vibrational spectra. Journal of Applied Physics, 2020, 127, .	2.5	11
35	Editors' Choice™ Vibrational Properties of Oxygen-Hydrogen Centers in H ⁺ - and D ⁺ -Implanted Ga ₂ O ₃ . ECS Journal of Solid State Science and Technology, 2020, 9, 125006.	1.8	11
36	Impurity-hydrogen complexes in $\hat{\Gamma}^2$ -Ga ₂ O ₃ : Hydrogenation of shallow donors vs deep acceptors. Journal of Applied Physics, 2022, 131, .	2.5	11

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37	Nitrogen-containing point defects in multi-crystalline Si solar-cell materials. Journal of Applied Physics, 2013, 114, 093707.	2.5	10
38	H trapping at the metastable cation vacancy in Ga_2O_3 and Al_2O_3 . Applied Physics Letters, 2022, 120, .	3.3	10
39	Hydrogen in Semiconductors. AIP Conference Proceedings, 2003, , .	0.4	9
40	Microscopic structure of a V_H center trapped by C in Si. Physical Review B, 2011, 84, .	3.2	8
41	Zhou et al. Reply. Physical Review Letters, 2000, 84, 4778-4778.	7.8	7
42	Bond angles for O-H defects in SnO_2 from polarization properties of their vibrational modes. Physical Review B, 2012, 85, .	3.2	6
43	Hydrogen in Ga_2O_3 . , 2019, , 191-210.		6
44	Vibrational Spectroscopy Of Gold Hydrogen Complexes In Silicon. Materials Research Society Symposia Proceedings, 1996, 442, 275.	0.1	5
45	Diffusivity of the interstitial hydrogen shallow donor in In_2O_3 . Journal of Applied Physics, 2018, 123, .	2.5	5
46	Hindered rotation of an OH-Li center in MgO: Infrared absorption experiments and theory. Physical Review B, 2007, 75, .	3.2	4
47	Contrasting the theoretical properties of hydrogen in SnO_2 , In_2O_3 , and TiO_2 . , 2014, , .		4
48	Spectroscopy of Transition-Metal-Hydrogen Complexes in Silicon. Materials Research Society Symposia Proceedings, 1995, 378, 341.	0.1	3
49	The structures of interstitial hydrogen centers in VO_2 in the dilute limit from their vibrational properties and theory. Journal of Physics Condensed Matter, 2016, 28, 395401.	1.8	2
50	Hydrogen Passivation of GaAs:C Epitaxial Layers Grown from Metalorganic Sources. Materials Research Society Symposia Proceedings, 1991, 240, 75.	0.1	1
51	Growth Induced Alignment Of The First Neighbor Shell Of CAs In $\text{Al}_x\text{Ga}_{1-x}\text{As}$. Materials Research Society Symposia Proceedings, 1996, 442, 387.	0.1	1
52	Deciphering the Vibrational Spectrum of Interstitial H_2 in Si. Materials Research Society Symposia Proceedings, 2004, 813, 611.	0.1	0
53	Reactions of H with C in Multicrystalline Si Solar-cell Materials. Materials Research Society Symposia Proceedings, 2010, 1268, 1.	0.1	0
54	Light-Element Impurities and their Reactions in Multicrystalline Si. Solid State Phenomena, 2013, 205-206, 201-208.	0.3	0