

# Ivaylo H Katzarov

## List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/1298644/publications.pdf>

Version: 2024-02-01

9  
papers

368  
citations

1307594

7  
h-index

1474206

9  
g-index

10  
all docs

10  
docs citations

10  
times ranked

396  
citing authors

#	ARTICLE	IF	CITATIONS
1	Understanding and mitigating hydrogen embrittlement of steels: a review of experimental, modelling and design progress from atomistic to continuum. <i>Journal of Materials Science</i> , 2018, 53, 6251-6290.	3.7	249
2	Hydrogen embrittlement I. Analysis of hydrogen-enhanced localized plasticity: Effect of hydrogen on the velocity of screw dislocations in $\langle 111 \rangle$ -Fe. <i>Physical Review Materials</i> , 2017, 1, .	2.4	39
3	Quantum and isotope effects on hydrogen diffusion, trapping and escape in iron. <i>Acta Materialia</i> , 2016, 103, 71-76.	7.9	21
4	Fully quantum mechanical calculation of the diffusivity of hydrogen in iron using the tight-binding approximation and path integral theory. <i>Physical Review B</i> , 2013, 88, .	3.2	17
5	The influence of hydrogen on plasticity in pure iron – theory and experiment. <i>Scientific Reports</i> , 2020, 10, 10209.	3.3	15
6	Hydrogen embrittlement II. Analysis of hydrogen-enhanced decohesion across (111) planes in $\langle 111 \rangle$ -Fe. <i>Physical Review Materials</i> , 2017, 1, .	2.4	14
7	Influence of hydrogen core force shielding on dislocation junctions in iron. <i>Physical Review Materials</i> , 2020, 4, .	2.4	4
8	Dynamic strain aging and the role of the Cottrell atmosphere. <i>Physical Review Materials</i> , 2022, 6, .	2.4	1
9	Quantum Effects on $\frac{1}{2}[111]$ Edge Dislocation Motion in Hydrogen-Charged Fe from Ring-Polymer Molecular Dynamics. <i>Lecture Notes in Computer Science</i> , 2022, , 132-139.	1.3	0