Tony Spassov

List of Publications by Year
in descending order

106 papers	2,088 citations	257101 24 h-index	276539 41 g-index
110 all docs	110 docs citations	110 times ranked	1609 citing authors

#	Article	IF	Citations
1	Hydrogenation of amorphous and nanocrystalline Mg-based alloys. Journal of Alloys and Compounds, 1999, 287, 243-250.	2.8	173
2	Mgâ€“Niâ€“RE nanocrystalline alloys for hydrogen storage. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 375-377, 794-799.	2.6	139
3	Thermal stability and hydriding properties of nanocrystalline melt-spun Mg63Ni30Y7 alloy. Journal of Alloys and Compounds, 1998, 279, 279-286.	2.8	130
4	Nanocrystallization and hydrogen storage in rapidly solidified Mgâ€“Niâ€“RE alloys. Journal of Alloys and Compounds, 2002, 334, 219-223.	2.8	100
5	Particle size and catalytic effect on the dehydriding of MgH2. Journal of Alloys and Compounds, 2005, 399, 237-241.	2.8	94
6	The effect of high-pressure torsion on the microstructure and hydrogen absorption kinetics of ball-milled Mg70Ni30. Journal of Alloys and Compounds, 2010, 504, 83-88.	2.8	74
7	Mechanochemical and chemical activation of lignocellulosic material to prepare powdered activated carbons for adsorption applications. Powder Technology, 2016, 299, 41-50.	2.1	60
8	Effect of microstructure on the electrocatalytic activity for hydrogen evolution of amorphous and nanocrystalline Zrâ€“Ni alloys. International Journal of Hydrogen Energy, 2012, 37, 10499-10506.	3.8	46
9	Hydrogen storage of nanocrystalline Mgâ€“Ni alloy processed by equal-channel angular pressing and cold rolling. International Journal of Hydrogen Energy, 2014, 39, 9911-9917.	3.8	44
10	The mechanism of generating nanoporous Au by de-alloying amorphous alloys. Acta Materialia, 2016, 119, 177-183.	3.8	44
11	Water inside Î²-cyclodextrin cavity: amount, stability and mechanism of binding. Beilstein Journal of Organic Chemistry, 2019, 15, 1592-1600.	1.3	43
12	Hydrogen storage of melt-spun amorphous Mg65Ni20Cu5Y10 alloy deformed by high-pressure torsion. International Journal of Hydrogen Energy, 2012, 37, 5769-5776.	3.8	40
13	Linearly polarized IR-spectroscopy of partially oriented solids as a colloid suspension in nematic host: a tool for spectroscopic and structural elucidation of the embedded chemicals. Journal of Inclusion Phenomena and Macrocyclic Chemistry, 2008, 61, 319-333.	1.6	37
14	Microstructure and electrochemical hydriding/dehydriding properties of ball-milled TiFe-based alloys. International Journal of Hydrogen Energy, 2010, 35, 6332-6337.	3.8	37
15	Hydrogen spillover on Rh/TiO₂: the FTIR study of donated electrons, co-adsorbed CO and H/D exchange. Physical Chemistry Chemical Physics, 2015, 17, 20563-20573.	1.3	37
16	Optimisation of the ball-milling and heat treatment parameters for synthesis of amorphous and nanocrystalline Mg2Ni-based alloys. Journal of Alloys and Compounds, 2003, 349, 242-254.	2.8	36
17	Microstructural development in nanocrystalline MgH2MgH2 during H-absorption/desorption cycling. International Journal of Hydrogen Energy, 2007, 32, 2914-2919.	3.8	32
18	Grain-growth in nanocrystalline zirconium-based alloys. Journal of Materials Science, 1993, 28, 2789-2794.	1.7	31

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19	Hydrogen sorption properties of ball-milled Mgâ€“C nanocomposites. International Journal of Hydrogen Energy, 2010, 35, 10396-10403.	3.8	31
20	Hydriding/dehydriding properties of nanocrystalline Mg87Ni3Al3M7 (M=Ti, Mn, Ce, La) alloys prepared by ball milling. Journal of Alloys and Compounds, 2005, 398, 139-144.	2.8	30
21	Electrochemical hydriding of amorphous and nanocrystalline TiNi-based alloys. Journal of Alloys and Compounds, 2007, 441, 197-201.	2.8	29
22	Nanocrystallization in Mg83Ni17â^'xYx (x=0, 7.5) amorphous alloys. Journal of Alloys and Compounds, 2002, 345, 123-129.	2.8	27
23	Microstructural evolution of ball-milled Mgâ€“Ni powder during hydrogen sorption. International Journal of Hydrogen Energy, 2013, 38, 8342-8349.	3.8	27
24	Room-temperature fabrication of core-shell nano-ZnO/pollen grain biocomposite for adsorptive removal of organic dye from water. Applied Surface Science, 2017, 400, 481-491.	3.1	26
25	Mechanochemical synthesis, thermal stability and selective electrochemical dissolution of Cuâ€“Ag solid solutions. Journal of Alloys and Compounds, 2009, 478, 232-236.	2.8	25
26	Mg6Ni formation in rapidly quenched amorphous Mgâ€“Ni alloys. Journal of Alloys and Compounds, 2009, 469, 193-196.	2.8	24
27	Hydrogen storage in Mgâ€“10at.% LaNi5 nanocomposites, synthesized by ball milling at different conditions. Journal of Alloys and Compounds, 2010, 495, 149-153.	2.8	21
28	Electrocatalytic behavior of Ni-based amorphous alloys for hydrogen evolution. Journal of Materials Science, 2011, 46, 7068-7073.	1.7	21
29	Phases and properties of nanocomposites of hydrogen-bonded liquid crystals and carbon nanotubes. Physical Review E, 2013, 88, 042503.	0.8	21
30	High glass forming ability correlated with microstructure and hydrogen storage properties of a Mgâ€“Cuâ€“Agâ€“Y glass. International Journal of Hydrogen Energy, 2014, 39, 9230-9240.	3.8	21
31	Selective dissolution of amorphous Zrâ€“Cuâ€“Niâ€“Al alloys. Corrosion Science, 2015, 94, 350-358.	3.0	21
32	Microstructural and morphological investigations on Mg-Nb2O5-CNT nanocomposites processed by high-pressure torsion for hydrogen storage applications. International Journal of Hydrogen Energy, 2020, 45, 7917-7928.	3.8	21
33	Influence of copper additions on the crystallization of amorphous Feî—¸Bî—¸Si alloys. Materials Science and Engineering, 1988, 97, 361-364.	0.1	20
34	Direct hydriding of Mg87Al7Ni3Mn3 by reactive mechanical milling in hydrogen atmosphere and influence of particle size on the dehydriding reaction. Journal of Alloys and Compounds, 2005, 388, 98-103.	2.8	20
35	Thermodynamic properties and absorptionâ€“desorption kinetics of Mg87Ni10Al3 alloy synthesised by reactive ball milling under H2 atmosphere. Journal of Alloys and Compounds, 2005, 404-406, 27-30.	2.8	20
36	Microstructure and hydrogen sorption kinetics of Mg nanopowders with catalyst. Journal of Alloys and Compounds, 2007, 434-435, 725-728.	2.8	20

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37	Î±-Cyclodextrin: How Effectively Can Its Hydrophobic Cavity Be Hydrated?. Journal of Physical Chemistry B, 2017, 121, 9260-9267.	1.2	20
38	Synthesis and hydrogen sorption properties of nanocrystalline Mg1.9M0.1Ni (M=Ti, Zr, V) obtained by mechanical alloying. Journal of Alloys and Compounds, 2003, 356-357, 639-643.	2.8	19
39	Synthesis and hydriding/dehydriding properties of Mg2Niâ€“AB (ABÂ=ÂTiNi or TiFe) nanocomposites. International Journal of Hydrogen Energy, 2011, 36, 7559-7566.	3.8	18
40	Microstructural investigations of carbon foams derived from modified coal-tar pitch. Micron, 2016, 89, 34-42.	1.1	18
41	Primary crystallization kinetics in rapidly quenched Mg-based Mgâ€“Niâ€“Y alloys. Journal of Alloys and Compounds, 2002, 345, 148-154.	2.8	17
42	Evolution of amorphous and nanocrystalline phases in mechanically alloyed Mg1.9M0.1Ni (M=Ti,Zr,V). Journal of Alloys and Compounds, 2004, 381, 66-71.	2.8	17
43	Electrochemical properties of nanocrystalline Mg2Ni-type alloys prepared by mechanical alloying. Journal of Alloys and Compounds, 2005, 404-406, 682-686.	2.8	17
44	Selective dissolution of amorphous and nanocrystalline Zr2Ni. Corrosion Science, 2013, 74, 308-313.	3.0	16
45	NO Reduction with CO on Copper and Ceria Oxides Supported on Alumina. Catalysis Letters, 2007, 119, 79-86.	1.4	15
46	Hydrogen Gas Phase and Electrochemical Hydriding of LaNi5â^'xMx (M = Sn, Co, Al) Alloys. Materials, 2021, 14, 14.	1.3	15
47	Microstructure and hydriding properties of ball-milled Mgâ€“10at.%MmNi5 (Mm=La, Ce-rich mischmetal) composites. Journal of Alloys and Compounds, 2006, 417, 85-91.	2.8	14
48	Synthesis, spectroscopic, thermal and structural elucidation of 5-amino-2-methoxypyridine ester amide of squaric acid ethyl ester: A new material with an infinite pseudo-layered structure and manifested NLO application. Journal of Molecular Structure, 2008, 875, 372-381.	1.8	14
49	Spectral evidence for hydrogen-induced reversible segregation of CO adsorbed on titania-supported rhodium. Physical Chemistry Chemical Physics, 2014, 16, 13136-13144.	1.3	14
50	Cyclodextrin-Based Solidâ€“Gas Clathrates. Journal of Agricultural and Food Chemistry, 2015, 63, 6603-6613.	2.4	14
51	Microstructural Investigation of Nanocrystalline Hydrogen-Storing Mg-Titanate Nanotube Composites Processed by High-Pressure Torsion. Energies, 2020, 13, 563.	1.6	12
52	Nanocrystalline Mg-Ni-Based Hydrogen Storage Alloys Produced by Nanocrystallization. Materials Science Forum, 1999, 307, 197-202.	0.3	11
53	Influence of alloying and microstructure on the electrochemical hydriding of TiNi-based ternary alloys. Journal of Applied Electrochemistry, 2008, 38, 437-444.	1.5	11
54	Facilitated Synthesis of Mg2Ni Based Composites with Attractive Hydrogen Sorption Properties. Materials, 2021, 14, 1936.	1.3	11

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55	Peculiarities of hydroxyapatite/nanodiamond composites as novel implants. Journal of Physics: Conference Series, 2007, 93, 012049.	0.3	10
56	Effects of non-steady state nucleation in the kinetics of crystallization of the amorphous alloy Fe80B20. Journal of Materials Science, 1987, 22, 3485-3490.	1.7	9
57	Oxidation of rapidly solidified Mg87Ni12Y1 alloy. Journal of Alloys and Compounds, 2002, 336, 163-169.	2.8	9
58	Influence of boron on the hydriding of nanocrystalline Mg2Ni. Intermetallics, 2013, 34, 63-68.	1.8	8
59	Hydriding kinetics of ball-milled nanocrystalline MgH2 powders. Journal of Materials Research, 2007, 22, 3144-3151.	1.2	7
60	Electrochemical hydriding of nanocrystalline TiFe alloys. Journal of Applied Electrochemistry, 2007, 37, 871-875.	1.5	7
61	Hydrogen sorption properties of 90Âwt% MgH2â€“10Âwt% MeSi2 (MeÂ=ÂTi, Cr). Journal of Materials Science, 2014, 49, 2647-2652.	1.7	7
62	Nanoporous metallic structures by de-alloying bulk glass forming Zr-based alloys. Intermetallics, 2018, 98, 148-153.	1.8	7
63	Oxidation Kinetics of Amorphous, Polycrystalline, and Nanocrystalline Co33Zr67 Alloys. Crystal Research and Technology, 1996, 31, 881-888.	0.6	6
64	Electrochemical hydrogen insertion in Mgâ€“La(Mm)Ni5 nanocomposites. Journal of Alloys and Compounds, 2007, 434-435, 760-763.	2.8	6
65	Influence of tin on the electrochemical and gas phase hydrogen sorption in Mg2â^'xSnxNi (x=0, 0.1, 0.3). Journal of Alloys and Compounds, 2008, 450, 288-292.	2.8	6
66	Influence of B substitution for Ti and Ni on the electrochemical hydriding of TiNi. Journal of Alloys and Compounds, 2009, 474, 527-530.	2.8	6
67	Crystallization behaviour of Feâ^'(Nb,Cu)â^'Siâ^'B metallic glasses. Journal of Thermal Analysis, 1995, 45, 1557-1563.	0.7	5
68	Hydriding/dehydriding of Mg87Ni3Al3Mm7 (Mm=La, Ce-rich mischmetal) alloy produced by mechanical milling. Journal of Alloys and Compounds, 2005, 403, 363-367.	2.8	5
69	Kinetics of Mg6Ni nanocrystallization in amorphous Mg83Ni17. Journal of Non-Crystalline Solids, 2009, 355, 1-5.	1.5	5
70	Mesoporous cellular-structured carbons derived from glucoseâ€“fructose syrup and their adsorption properties towards acetaminophen. Functional Materials Letters, 2017, 10, 1750080.	0.7	5
71	Hydrogen in Cuï£¿Ti and Niï£¿Ti Metallic Glasses. Crystal Research and Technology, 1994, 29, 99-107.	0.6	4
72	Kinetic analysis of the Î±-Î² HgI2 phase transition. Magyar AprÃ³vad KÃ¶zlemÃ©nyek, 2002, 70, 605-614.	1.4	4

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73	Nanocrystallization of hydrogen-charged Mg76Ni19Y5amorphous alloy. Journal of Thermal Analysis and Calorimetry, 2004, 75, 373-378.	2.0	4
74	Synthesis and hydrogen adsorption in Cu-based coordination framework materials. Scripta Materialia, 2008, 58, 118-121.	2.6	4
75	Hydrogen in amorphous TM33Zr67 (TM=Fe, Co, Ni) alloys. Journal of Thermal Analysis and Calorimetry, 2009, 96, 347-351.	2.0	4
76	Hydrogen Storage, Microstructure and Mechanical Properties of Strained Mg₆₅Ni₂₀Cu₅Y₁₀Metallic Glass. Materials Science Forum, 0, 729, 74-79.	0.3	4
77	Liquid crystal nanocomposites produced by mixtures of hydrogen bonded achiral liquid crystals and functionalized carbon nanotubes. Journal of Physics: Conference Series, 2014, 558, 012024.	0.3	4
78	Influence of Milling Conditions on the Hydriding Properties of Mg-C Nanocomposites. Journal of Nanomaterials, 2015, 2015, 1-6.	1.5	4
79	Some aspects of the thermal behaviour of In2Se3. Journal of Thermal Analysis, 1987, 32, 115-120.	0.7	3
80	Investigation of the nucleation kinetics and the linear growth rate during the devitrification of Fe-B amorphous alloys with the aid of a thermomagnetic balance. Crystal Research and Technology, 1988, 23, 1225-1230.	0.6	3
81	Influence of chromium and silicon concentration on crystallization behaviour, electrical resistivity and magnetic properties of (FeCr)BSi amorphous alloys. Solid State Communications, 1991, 80, 89-94.	0.9	3
82	A Study of the Nucleation Kinetics, Linear Growth and the Overall Crystallization Kinetics of Meltspun Pd80Si20 Amorphous alloy. Crystal Research and Technology, 1992, 27, 149-156.	0.6	3
83	A modified Johnson-Mehl-Avrami kinetic model of overall crystallization of Feî—¸Coî—¸B metallic glasses. Journal of Alloys and Compounds, 1993, 198, 187-191.	2.8	3
84	Nanocrystallization of Co33Zr67 Glasses. Journal of Materials Science, 1997, 32, 1483-1486.	1.7	3
85	New Gd-Al nanophase obtained by crystallization of Gd4Al3 metallic glass. Scripta Materialia, 1999, 12, 609-612.	0.5	3
86	Influence of Particle Size on the Hydrogen Sorption Properties of Ball-Milled MgH₂ with Nb₂O₅ as Catalyst. Journal of Metastable and Nanocrystalline Materials, 2005, 24-25, 447-450.	0.1	3
87	Study of Organosilicon Plasma Polymer Used in Composite Layers with Biomedical Application. , 2010, , .		3
88	High-pressure DSC study on the hydriding and dehydriding of Mg/C nanocomposites. Journal of Thermal Analysis and Calorimetry, 2014, 116, 265-272.	2.0	3
89	Porous Sn obtained by selective electrochemical dissolution of melt-spun Zn70Sn30 alloys with lithium and sodium storage properties. Journal of Alloys and Compounds, 2021, 877, 160319.	2.8	3
90	Structural and hydrogen storage characterization of nanocrystalline magnesium synthesized by ECAP and catalyzed by different nanotube additives. Reviews on Advanced Materials Science, 2021, 60, 884-893.	1.4	3

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91	Hydrogen sorption properties of ternary intermetallic Mgâ€“(Ir,Rh,Pd)â€“Si compounds. Journal of Alloys and Compounds, 2007, 429, 306-310.	2.8	2
92	Đ•lectrochemical hydriding/dehydriding of nanocrystalline Mg2â^'x Sn x Ni (xÂ=Â0, 0.1, 0.3). Journal of Applied Electrochemistry, 2008, 38, 197-202.	1.5	2
93	Effect of SEM electron beam on the hydrogen desorption of pre-charged amorphous Cu33Ti67 alloys. Materials Characterization, 2009, 60, 26-29.	1.9	2
94	Hydrogenation of Nanocrystalline Mg₂Ni Alloy Prepared by High Energy Ball-Milling Followed by Equal-Channel Angular Pressing or Cold Rolling. Advances in Science and Technology, 0, , .	0.2	2
95	LiMnPO‹sub›4‹/sub›-olivine deposited on a nanoporous alloy as an additive-free electrode for lithium ion batteries. Dalton Transactions, 2019, 48, 17037-17044.	1.6	2
96	High-temperature oxidation of Cuâ€“Ti-based rapidly solidified alloys. International Journal of Materials Research, 2003, 94, 134-138.	0.8	2
97	Grain Growth Kinetics in Nanocrystalline ZR-Based Alloys. Key Engineering Materials, 1993, 81-83, 249-254.	0.4	1
98	Nanocrystalline Mg-Ni-Based Hydrogen Storage Alloys Produced by Nanocrystallization. Journal of Metastable and Nanocrystalline Materials, 1999, 1, 197-202.	0.1	1
99	Hydriding properties of amorphous Niâ€“B alloy studied by DSC and thermogravimetry. Thermochimica Acta, 1999, 326, 69-73.	1.2	1
100	Hydroxyapatite Reinforced Coatings with Incorporated Detonationally Generated Nanodiamonds. , 2010, , .		1
101	Influence of Milling Conditions on the Behavior of AB‹sub›5‹/sub›-Type Materials as Metal Hydride Electrodes. Journal of Nanomaterials, 2019, 2019, 1-5.	1.5	1
102	METAL HYDRIDE ALLOYS FOR ELECTROCHEMICAL ENERGY SOURCE APPLICATIONS. Materials Research Society Symposia Proceedings, 2007, 1042, 1.	0.1	0
103	Synthesis and study of structural, morphological and electrochemical properties of TiFe‹sub›1-x‹/sub›Co‹sub›x‹/sub›hydrogen storage alloys. Journal of Physics: Conference Series, 2008, 113, 012049.	0.3	0
104	Thermo-mechanical study of bulk glass forming Zr-Cu-Ni-Al alloys. Journal of Non-Crystalline Solids, 2016, 443, 103-107.	1.5	0
105	Static and Dynamic Thermal Properties of a Pd40Ni40Si20 Glassy Alloy. Metals, 2019, 9, 1157.	1.0	0
106	Ibuprofen/Î²-CD complexation by controlled annealing of their mechanical mixture. Bulgarian Chemical Communications, 2019, 51, 326-331.	0.2	0