

Jerzy Szpunar

List of Publications by Year in descending order

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Version: 2024-02-01

54
papers

2,049
citations

331670

21
h-index

243625

44
g-index

56
all docs

56
docs citations

56
times ranked

2028
citing authors

#	ARTICLE	IF	CITATIONS
1	A critical review on the current technologies for the generation, storage, and transportation of hydrogen. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 13771-13802.	7.1	196
2	A critical perspective on pipeline processing and failure risks in hydrogen service conditions. <i>Journal of Alloys and Compounds</i> , 2021, 857, 158240.	5.5	17
3	CS ₂ mediated synthesis of corrosion-inhibiting mercaptobenzothiazole molecule for industrial zinc: Experimental studies and molecular dynamic simulations. <i>Journal of Molecular Liquids</i> , 2021, 324, 115129.	4.9	7
4	EBSD Microstructural studies on quenched-tempered API 5L X65 pipeline steel. <i>Philosophical Magazine</i> , 2021, 101, 1895-1912.	1.6	4
5	Effect of Friction Stir Welding on the Microstructure and Mechanical Properties of Super Duplex Stainless Steel. <i>Metallography, Microstructure, and Analysis</i> , 2021, 10, 383-391.	1.0	3
6	Sensitivity of mechanical properties of pipeline steels to microalloying additions and structural characteristics. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021, 826, 141984.	5.6	6
7	Anticorrosion allyl sulfonate graft chitosan/graphene oxide nanocomposite material. <i>Materials Advances</i> , 2021, 2, 1621-1634.	5.4	6
8	Effect of silylating agents on the superhydrophobic and self-cleaning properties of siloxane/polydimethylsiloxane nanocomposite coatings on cellulosic fabric filters for oil/water separation. <i>RSC Advances</i> , 2021, 11, 9586-9599.	3.6	13
9	Synthesis and characterization of protective silica reinforced hybrid poly(vinylpyrrolidone)/acrylate/silane nanocomposite coatings. <i>New Journal of Chemistry</i> , 2020, 44, 1117-1126.	2.8	10
10	Self-healing composite coatings with protective and anticorrosion potentials: classification by healing mechanism. , 2020, , 123-162.		1
11	Synthesis, characterization and application of glucosyloxyethyl acrylate graft chitosan against pipeline steel corrosion. <i>Journal of Molecular Liquids</i> , 2020, 315, 113772.	4.9	14
12	Synergistic Erosion-Corrosion Behavior of AISI 2205 Duplex Stainless Steel Elbows in Potash Brine-Sand Slurry and the Associated Microstructural Changes. <i>Journal of Materials Engineering and Performance</i> , 2020, 29, 7456-7467.	2.5	2
13	<i>In vitro</i> corrosion studies of stainless-steel dental substrates during <i>Porphyromonas gingivalis</i> biofilm growth in artificial saliva solutions: providing insights into the role of resident oral bacterium. <i>RSC Advances</i> , 2020, 10, 31280-31294.	3.6	11
14	Density Functional Theory Study of Oxygen Adsorption and Dissociation on Lower Miller Index Surfaces of ThN. <i>Journal of Physical Chemistry C</i> , 2020, 124, 24849-24860.	3.1	7
15	Effect of Microstructure and Texture Evolution on the Electrochemical Corrosion Behavior of Warm-Rolled API 5L X70 Pipeline Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2020, 51, 2255-2275.	2.2	6
16	Investigation of the hydrogen induced cracking behaviour of API 5L X65 pipeline steel. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 17671-17684.	7.1	48
17	Characterization of aluminum/alumina/TiC hybrid composites in 3D produced by anodizing and accumulating roll bonding process using synchrotron radiation tomography. <i>Journal of Composite Materials</i> , 2019, 53, 1215-1227.	2.4	2
18	DFT Study of the Adsorption and Dissociation of Water on Clean, Defective, and Oxygen-Covered U ₃ Si ₂ {001}, {110}, and {111} Surfaces. <i>Journal of Physical Chemistry C</i> , 2019, 123, 19453-19467.	3.1	13

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19	Accelerated corrosion of pipeline steel in the presence of <i>Desulfovibrio desulfuricans</i> biofilm due to carbon source deprivation in CO ₂ saturated medium. <i>Materials Science and Engineering C</i> , 2019, 105, 110095.	7.3	28
20	A Comparative Study of the Role of Hydrogen on Degradation of the Mechanical Properties of API X60, X60SS, and X70 Pipeline Steels. <i>Steel Research International</i> , 2019, 90, 1900078.	1.8	17
21	An improved procedure for acquiring yield curves over a large range of strains. <i>Journal of Strain Analysis for Engineering Design</i> , 2019, 54, 227-235.	1.8	3
22	Atomistic and experimental study on thermal conductivity of bulk and porous cerium dioxide. <i>Scientific Reports</i> , 2019, 9, 6326.	3.3	20
23	Conversion of Imidazole to <i>N</i> -(3-Aminopropyl)imidazole toward Enhanced Corrosion Protection of Steel in Combination with Carboxymethyl Chitosan Grafted Poly(2-methyl-1-vinylimidazole). <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 7179-7192.	3.7	38
24	Relationship between microstructural features in pipeline steel and hydrogen assisted degradation. <i>Engineering Failure Analysis</i> , 2019, 96, 496-507.	4.0	22
25	Tailoring the capability of carbon nitride (C ₃ N) nanosheets toward hydrogen storage upon light transition metal decoration. <i>Nanotechnology</i> , 2019, 30, 075404.	2.6	40
26	Ultrasound-assisted synthesis of zinc molybdate nanocrystals and molybdate-doped epoxy/PDMS nanocomposite coatings for Mg alloy protection. <i>Ultrasonics Sonochemistry</i> , 2018, 44, 288-298.	8.2	33
27	Effect of Thermomechanical Processing and Crystallographic Orientation on the Corrosion Behavior of API 5L X70 Pipeline Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2018, 49, 2269-2280.	2.2	22
28	Fabricating protective silica/PDMS composite films for Mg alloy: Correlating bulk silica reinforcement with barrier performance. <i>Journal of Non-Crystalline Solids</i> , 2018, 485, 47-56.	3.1	13
29	Hydrogen induced cracking susceptibility of API 5L X70 pipeline steel in relation to microstructure and crystallographic texture developed after different thermomechanical treatments. <i>Materials Characterization</i> , 2018, 145, 142-156.	4.4	37
30	Bioinspired and hydrophobic alkyl-silanized protective polymer coating for Mg alloy. <i>Progress in Natural Science: Materials International</i> , 2018, 28, 354-362.	4.4	7
31	Hydrogen related degradation in pipeline steel: A review. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 14584-14617.	7.1	217
32	Electrochemical and surface analyses of X70 steel corrosion in simulated acid pickling medium: Effect of poly (N-vinyl imidazole) grafted carboxymethyl chitosan additive. <i>Electrochimica Acta</i> , 2018, 278, 302-312.	5.2	93
33	Influence of Thermomechanically Controlled Processing on Microstructure and Hydrogen Induced Cracking Susceptibility of API 5L X70 Pipeline Steel. <i>Journal of Materials Engineering and Performance</i> , 2018, 27, 4533-4547.	2.5	10
34	Recent developments and applications of protective silicone coatings: A review of PDMS functional materials. <i>Progress in Organic Coatings</i> , 2017, 111, 124-163.	3.9	430
35	Enhanced surface protective performance of chitosanic hydrogel via nano-CeO ₂ dispersion for API 5L X70 alloy: Experimental and theoretical investigations of the role of CeO ₂ . <i>Journal of Molecular Liquids</i> , 2017, 241, 684-693.	4.9	16
36	Microstructure and Texture Evolution during Single- and Multiple-Pass Friction Stir Processing of Heat-Treatable Aluminum Alloy 2024. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2017, 48, 4247-4261.	2.2	24

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37	Ceria/Acrylic Polymer Microgel Composite: Synthesis, Characterization, and Anticorrosion Application for API 5L X70 Substrate in Chloride-Enriched Medium. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 5586-5597.	3.7	22
38	Hydrogen storage on bare Cu atom and Cu-functionalized boron-doped graphene: A first principles study. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 4233-4243.	7.1	68
39	Electron backscatter and X-ray diffraction studies on the deformation and annealing textures of austenitic stainless steel 310S. <i>Materials Characterization</i> , 2017, 123, 115-127.	4.4	26
40	Oxidation Behavior of Austenitic Stainless Steel 316L and 310S in Air and Supercritical Water. <i>Journal of Nuclear Engineering and Radiation Science</i> , 2016, 2, .	0.4	9
41	Microstructural Aspects of TIG and A-TIG Welding Process of Dissimilar Steel Grades and Correlation to Mechanical Behavior. <i>Transactions of the Indian Institute of Metals</i> , 2016, 69, 1765-1773.	1.5	20
42	Corrosion inhibition of X70 sheets by a film-forming imidazole derivative at acidic pH. <i>RSC Advances</i> , 2016, 6, 108777-108790.	3.6	28
43	Estimation and validation of maxwell stress of planar dielectric elastomer actuators. <i>Journal of Mechanical Science and Technology</i> , 2016, 30, 429-436.	1.5	18
44	Restoration Mechanisms During the Friction Stir Processing of Aluminum Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015, 46, 2823-2828.	2.2	23
45	The effect of thermo-mechanical processing on grain boundary character distribution in Incoloy 800H/HT. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 626, 51-60.	5.6	38
46	Effect of thermo-mechanical processing on oxidation of austenitic stainless steel 316L in supercritical water. <i>Corrosion Science</i> , 2015, 94, 197-206.	6.6	63
47	Characterization of Viscoelasticity and Self-Healing Ability of VHB 4910. <i>Macromolecular Materials and Engineering</i> , 2015, 300, 99-106.	3.6	20
48	The oxidation resistance of thermo-mechanically processed Incoloy 800HT in supercritical water. <i>Journal of Supercritical Fluids</i> , 2015, 101, 150-160.	3.2	17
49	Microstructure and Crystallographic Texture Evolution During the Friction-Stir Processing of a Precipitation-Hardenable Aluminum Alloy. <i>Jom</i> , 2015, 67, 1014-1021.	1.9	34
50	The self-healing mechanism of an industrial acrylic elastomer. <i>Journal of Applied Polymer Science</i> , 2015, 132, .	2.6	7
51	Microstructural investigation on marforming and conventional cold deformation in Ni-Ti-Fe-based shape memory alloys. <i>International Journal of Materials Research</i> , 2015, 106, 852-862.	0.3	7
52	Layer-by-Layer Assembly of a Self-Healing Anticorrosion Coating on Magnesium Alloys. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 27271-27278.	8.0	124
53	Effect of thermo-mechanical processing on texture evolution in austenitic stainless steel 316L. <i>Materials Characterization</i> , 2014, 98, 10-17.	4.4	65
54	Production of High-Strength Al/Al ₂ O ₃ /WC Composite by Accumulative Roll Bonding. <i>Journal of Materials Engineering and Performance</i> , 2014, 23, 3152-3158.	2.5	11