Jerzy Szpunar

List of Publications by Year in descending order

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	Recent developments and applications of protective silicone coatings: A review of PDMS functional materials. Progress in Organic Coatings, 2017, 111, 124-163.	3.9	430
2	Hydrogen related degradation in pipeline steel: AÂreview. International Journal of Hydrogen Energy, 2018, 43, 14584-14617.	7.1	217
3	A critical review on the current technologies for the generation, storage, and transportation of hydrogen. International Journal of Hydrogen Energy, 2022, 47, 13771-13802.	7.1	196
4	Layer-by-Layer Assembly of a Self-Healing Anticorrosion Coating on Magnesium Alloys. ACS Applied Materials & Interfaces, 2015, 7, 27271-27278.	8.0	124
5	Electrochemical and surface analyses of X70 steel corrosion in simulated acid pickling medium: Effect of poly (N-vinyl imidazole) grafted carboxymethyl chitosan additive. Electrochimica Acta, 2018, 278, 302-312.	5.2	93
6	Hydrogen storage on bare Cu atom and Cu-functionalized boron-doped graphene: A first principles study. International Journal of Hydrogen Energy, 2017, 42, 4233-4243.	7.1	68
7	Effect of thermo-mechanical processing on texture evolution in austenitic stainless steel 316L. Materials Characterization, 2014, 98, 10-17.	4.4	65
8	Effect of thermo-mechanical processing on oxidation of austenitic stainless steel 316L in supercritical water. Corrosion Science, 2015, 94, 197-206.	6.6	63
9	Investigation of the hydrogen induced cracking behaviour of API 5L X65 pipeline steel. International Journal of Hydrogen Energy, 2020, 45, 17671-17684.	7.1	48
10	Tailoring the capability of carbon nitride (C₃N) nanosheets toward hydrogen storage upon light transition metal decoration. Nanotechnology, 2019, 30, 075404.	2.6	40
11	The effect of thermo-mechanical processing on grain boundary character distribution in Incoloy 800H/HT. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 626, 51-60.	5.6	38
12	Conversion of Imidazole to N-(3-Aminopropyl)imidazole toward Enhanced Corrosion Protection of Steel in Combination with Carboxymethyl Chitosan Grafted Poly(2-methyl-1-vinylimidazole). Industrial & Engineering Chemistry Research, 2019, 58, 7179-7192.	3.7	38
13	Hydrogen induced cracking susceptibility of API 5L X70 pipeline steel in relation to microstructure and crystallographic texture developed after different thermomechanical treatments. Materials Characterization, 2018, 145, 142-156.	4.4	37
14	Microstructure and Crystallographic Texture Evolution During the Friction-Stir Processing of a Precipitation-Hardenable Aluminum Alloy. Jom, 2015, 67, 1014-1021.	1.9	34
15	Ultrasound-assisted synthesis of zinc molybdate nanocrystals and molybdate-doped epoxy/PDMS nanocomposite coatings for Mg alloy protection. Ultrasonics Sonochemistry, 2018, 44, 288-298.	8.2	33
16	Corrosion inhibition of X70 sheets by a film-forming imidazole derivative at acidic pH. RSC Advances, 2016, 6, 108777-108790.	3.6	28
17	Accelerated corrosion of pipeline steel in the presence of Desulfovibrio desulfuricans biofilm due to carbon source deprivation in CO2 saturated medium. Materials Science and Engineering C, 2019, 105, 110095.	7.3	28
18	Electron backscatter and X-ray diffraction studies on the deformation and annealing textures of austenitic stainless steel 310S. Materials Characterization, 2017, 123, 115-127.	4.4	26

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19	Microstructure and Texture Evolution during Single- and Multiple-Pass Friction Stir Processing of Heat-Treatable Aluminum Alloy 2024. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 4247-4261.	2.2	24
20	Restoration Mechanisms During the Friction Stir Processing of Aluminum Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 2823-2828.	2.2	23
21	Ceria/Acrylic Polymer Microgel Composite: Synthesis, Characterization, and Anticorrosion Application for API 5L X70 Substrate in Chloride-Enriched Medium. Industrial & Engineering Chemistry Research, 2017, 56, 5586-5597.	3.7	22
22	Effect of Thermomechanical Processing and Crystallographic Orientation on the Corrosion Behavior of API 5L X70 Pipeline Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 2269-2280.	2.2	22
23	Relationship between microstructural features in pipeline steel and hydrogen assisted degradation. Engineering Failure Analysis, 2019, 96, 496-507.	4.0	22
24	Characterization of Viscoelasticity and Selfâ€Healing Ability of VHB 4910. Macromolecular Materials and Engineering, 2015, 300, 99-106.	3.6	20
25	Microstructural Aspects of TIG and A-TIG Welding Process of Dissimilar Steel Grades and Correlation to Mechanical Behavior. Transactions of the Indian Institute of Metals, 2016, 69, 1765-1773.	1.5	20
26	Atomistic and experimental study on thermal conductivity of bulk and porous cerium dioxide. Scientific Reports, 2019, 9, 6326.	3.3	20
27	Estimation and validation of maxwell stress of planar dielectric elastomer actuators. Journal of Mechanical Science and Technology, 2016, 30, 429-436.	1.5	18
28	The oxidation resistance of thermo-mechanically processed Incoloy 800HT in supercritical water. Journal of Supercritical Fluids, 2015, 101, 150-160.	3.2	17
29	A Comparative Study of the Role of Hydrogen on Degradation of the Mechanical Properties of API X60, X60SS, and X70 Pipeline Steels. Steel Research International, 2019, 90, 1900078.	1.8	17
30	A critical perspective on pipeline processing and failure risks in hydrogen service conditions. Journal of Alloys and Compounds, 2021, 857, 158240.	5.5	17
31	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. Journal of Molecular Liquids, 2017, 241, 684-693.	4.9	16
32	Synthesis, characterization and application of glucosyloxyethyl acrylate graft chitosan against pipeline steel corrosion. Journal of Molecular Liquids, 2020, 315, 113772.	4.9	14
33	Fabricating protective silica/PMDS composite films for Mg alloy: Correlating bulk silica reinforcement with barrier performance. Journal of Non-Crystalline Solids, 2018, 485, 47-56.	3.1	13
34	DFT +UStudy of the Adsorption and Dissociation of Water on Clean, Defective, and Oxygen-Covered U₃Si₂{001}, {110}, and {111} Surfaces. Journal of Physical Chemistry C, 2019, 123, 19453-19467.	3.1	13
35	Effect of silylating agents on the superhydrophobic and self-cleaning properties of siloxane/polydimethylsiloxane nanocomposite coatings on cellulosic fabric filters for oilâ€“water separation. RSC Advances, 2021, 11, 9586-9599.	3.6	13
36	Production of High-Strength Al/Al2O3/WC Composite by Accumulative Roll Bonding. Journal of Materials Engineering and Performance, 2014, 23, 3152-3158.	2.5	11

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37	In vitrocorrosion studies of stainless-steel dental substrates duringPorphyromonas gingivalisbiofilm growth in artificial saliva solutions: providing insights into the role of resident oral bacterium. RSC Advances, 2020, 10, 31280-31294.	3.6	11
38	Influence of Thermomechanically Controlled Processing on Microstructure and HydrogenÂInduced Cracking Susceptibility of API 5L X70 Pipeline Steel. Journal of Materials Engineering and Performance, 2018, 27, 4533-4547.	2.5	10
39	Synthesis and characterization of protective silica reinforced hybrid poly(vinylpyrrolidone)/acrylate/silane nanocomposite coatings. New Journal of Chemistry, 2020, 44, 1117-1126.	2.8	10
40	Oxidation Behavior of Austenitic Stainless Steel 316L and 310S in Air and Supercritical Water. Journal of Nuclear Engineering and Radiation Science, 2016, 2, .	0.4	9
41	The selfâ€healing mechanism of an industrial acrylic elastomer. Journal of Applied Polymer Science, 2015, 132, .	2.6	7
42	Microstructural investigation on marforming and conventional cold deformation in Niâ€“Tiâ€“Fe-based shape memory alloys. International Journal of Materials Research, 2015, 106, 852-862.	0.3	7
43	Bioinspired and hydrophobic alkyl-silanized protective polymer coating for Mg alloy. Progress in Natural Science: Materials International, 2018, 28, 354-362.	4.4	7
44	Density Functional Theory Study of Oxygen Adsorption and Dissociation on Lower Miller Index Surfaces of ThN. Journal of Physical Chemistry C, 2020, 124, 24849-24860.	3.1	7
45	CS2 mediated synthesis of corrosion-inhibiting mercaptobenzothiazole molecule for industrial zinc: Experimental studies and molecular dynamic simulations. Journal of Molecular Liquids, 2021, 324, 115129.	4.9	7
46	Effect of Microstructure and Texture Evolution on the Electrochemical Corrosion Behavior of Warm-Rolled API 5L X70 Pipeline Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 2255-2275.	2.2	6
47	Sensitivity of mechanical properties of pipeline steels to microalloying additions and structural characteristics. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 826, 141984.	5.6	6
48	Anticorrosion allyl sulfonate graft chitosan/graphene oxide nanocomposite material. Materials Advances, 2021, 2, 1621-1634.	5.4	6
49	EBSD Microstructural studies on quenched-tempered API 5L X65 pipeline steel. Philosophical Magazine, 2021, 101, 1895-1912.	1.6	4
50	An improved procedure for acquiring yield curves over a large range of strains. Journal of Strain Analysis for Engineering Design, 2019, 54, 227-235.	1.8	3
51	Effect of Friction Stir Welding on the Microstructure and Mechanical Properties of Super Duplex Stainless Steel. Metallography, Microstructure, and Analysis, 2021, 10, 383-391.	1.0	3
52	Characterization of aluminum/alumina/TiC hybrid composites in 3D produced by anodizing and accumulating roll bonding process using synchrotron radiation tomography. Journal of Composite Materials, 2019, 53, 1215-1227.	2.4	2
53	Synergistic Erosion-Corrosion Behavior of AISI 2205 Duplex Stainless Steel Elbows in Potash Brine-Sand Slurry and the Associated Microstructural Changes. Journal of Materials Engineering and Performance, 2020, 29, 7456-7467.	2.5	2
54	Self-healing composite coatings with protective and anticorrosion potentials: classification by healing mechanism. , 2020, , 123-162.		1