

Muhammad Zakria Butt

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

81
papers

611
citations

13
h-index

19
g-index

83
ext. papers

730
ext. citations

3
avg, IF

4.03
L-index

#	Paper	IF	Citations
81	Effect of Thermal Exposure on the Crystallographic Features and Surface Hardness of AA-7075-T6 Material. <i>Brazilian Journal of Physics</i> , 2021 , 51, 566-575	1.2	1
80	Impact of Carbon Ion Implantation on the Crystal Structure, Surface Morphology, Vickers Hardness and Electrochemical Corrosion of Zirconium. <i>Journal of Materials Engineering and Performance</i> , 2021 , 30, 4604-4618	1.6	3
79	Impact of Laser Fluence in Modifying the Surface Characteristics of Laser-Treated Monocrystalline Zinc. <i>Journal of Materials Engineering and Performance</i> , 2021 , 30, 320-333	1.6	1
78	Investigation of antifungal response of NiO and copper-doped NiO thin films against <i>Aspergillus niger</i> and <i>Macrophomina phaseolina</i> fungi. <i>Environmental Science and Pollution Research</i> , 2021 , 1	5.1	0
77	Effect of thermal exposure on the strength and stress relaxation response of AA-7075-T6 material. <i>Materials Chemistry and Physics</i> , 2021 , 270, 124791	4.4	
76	Optical and electrical properties of NiO and Cu-doped NiO thin films synthesized by spray pyrolysis. <i>Optical Materials</i> , 2021 , 119, 111369	3.3	10
75	Influence of aluminum precursor nature on the properties of AZO thin films and its potential application as oxygen sensor. <i>Optical Materials</i> , 2021 , 120, 111406	3.3	1
74	Synthesis, characterization and antibacterial performance of transparent c-axis oriented Al doped ZnO thin films. <i>Surfaces and Interfaces</i> , 2021 , 27, 101452	4.1	1
73	Impact of copper doping in NiO thin films on their structure, morphology, and antibacterial activity against <i>Escherichia Coli</i> . <i>Ceramics International</i> , 2020 , 46, 5037-5049	5.1	14
72	Nitrogen Ions Implantation in W-Based Quad Alloy: Structure, Electrical Resistivity, Surface Roughness and Vickers Hardness as a Function of Ion Dose. <i>Metals and Materials International</i> , 2020 , 27, 3342	2.4	5
71	Synthesis and characterization of sol-gel derived La and Sm doped ZnO thin films: A solar light photo catalyst for methylene blue. <i>Thin Solid Films</i> , 2019 , 679, 86-98	2.2	25
70	Role of carbon ions implantation in modifying the structural, electrical, and mechanical properties of W _{85.57} Ni _{8.34} Cu _{1.34} Mo alloy. <i>Physica B: Condensed Matter</i> , 2019 , 573, 49-61	2.8	4
69	A comparative study of the anodic alumina film thickness measured via SEM and evaluated using Faraday's Law. <i>Materials Research Express</i> , 2019 , 6, 046404	1.7	1
68	Impact of 1064 nm 10 ns pulsed laser on the surface morphology, structure, and hardness of Pd ₈₀ Ni ₂₀ alloy. <i>International Journal of Advanced Manufacturing Technology</i> , 2017 , 90, 1857-1869	3.2	8
67	Structural, electrical, and mechanical characterization of Al 5086 alloy irradiated with 248 nm 10 ns KrF excimer laser. <i>Journal of Alloys and Compounds</i> , 2017 , 695, 3069-3082	5.7	10
66	Modifications in morphological, structural, electrical and mechanical properties of Fe-1.0 wt.% Cu alloy on irradiation with 532 nm 10 ns Nd:YAG laser shots. <i>Materials Research Express</i> , 2017 , 4, 096501	1.7	3
65	Investigation of morphological, structural, and mechanical characteristics of Zircaloy-4 irradiated with 3.5 MeV hydrogen ions beam. <i>Materials Research Express</i> , 2017 , 4, 096507	1.7	7

64	The role of Al, Ba, and Cd dopant elements in tailoring the properties of c-axis oriented ZnO thin films. <i>Physica B: Condensed Matter</i> , 2017 , 506, 83-93	2.8	9
63	Correlation between structural and optoelectronic properties of tin doped indium oxide thin films. <i>Optik</i> , 2017 , 128, 235-246	2.5	19
62	Surface-pattern geometry, topography, and chemical modifications during KrF excimer laser micro-drilling of p-type Si (111) wafers in ambient environment of HCl fumes in air. <i>Materials Research Express</i> , 2016 , 3, 115901	1.7	
61	Impact of 532 nm 6 ns laser pulses on (104) oriented zinc single crystal: surface morphology, phase transformation, and structure hardness relationship. <i>Materials Research Express</i> , 2016 , 3, 096503	1.7	4
60	Deposition and characterization of multilayer DLC:Mo thin films grown on silicon substrate by off-axis pulsed laser deposition technique. <i>Applied Surface Science</i> , 2015 , 331, 407-414	6.7	20
59	Deformation mechanism in NiAl single crystals at low temperatures. <i>Intermetallics</i> , 2015 , 57, 93-97	3.5	
58	Structural, electrical, and mechanical characteristics of proton beam irradiated Al5086 alloy. <i>Physica B: Condensed Matter</i> , 2015 , 456, 275-282	2.8	13
57	Hardness-structure Relationship in Nd:YAG Laser Irradiated High-purity Zinc. <i>Materials Today: Proceedings</i> , 2015 , 2, 5537-5542	1.4	1
56	Surface Roughness and Electrical Resistivity of High-purity Zinc Irradiated with Nd:YAG Laser Pulses. <i>Materials Today: Proceedings</i> , 2015 , 2, 5587-5591	1.4	1
55	The Inverse Hall-Petch Effect in Nd:YAG Laser Irradiated Nickel. <i>Materials Today: Proceedings</i> , 2015 , 2, 5302-5307	1.4	3
54	Debye-Waller Thermal Parameter of Crystalline Materials as a Determinant of their Properties in various Phases: An Overview. <i>Materials Today: Proceedings</i> , 2015 , 2, 5102-5110	1.4	2
53	Irradiation Effects of 40 MeV Fe ions on Structural and Optical Properties of CR-39 Polymer. <i>Materials Today: Proceedings</i> , 2015 , 2, 5504-5509	1.4	2
52	Effects of IR Laser Shots on the Surface Hardness and Electrical Resistivity of High-Purity Iron. <i>Journal of Materials Engineering and Performance</i> , 2014 , 23, 772-779	1.6	11
51	Structural and optical properties of CR-39 polymer implanted with laser produced plasma ions of iron. <i>Physica B: Condensed Matter</i> , 2014 , 454, 179-183	2.8	13
50	Structural characteristics and inverse Hall-Petch relation in high-purity nickel irradiated with nanosecond infrared laser pulses. <i>Physica B: Condensed Matter</i> , 2014 , 444, 77-84	2.8	16
49	Surface roughness and electrical resistivity of high-purity zinc irradiated with nanosecond visible laser pulses. <i>Applied Surface Science</i> , 2014 , 305, 466-473	6.7	24
48	Pulsed laser deposition and characterization of Alnico5 magnetic films. <i>Applied Surface Science</i> , 2013 , 280, 975-980	6.7	
47	Surface morphology and structural characterization of high-purity iron irradiated with Nd:YAG pulsed laser. <i>Physica B: Condensed Matter</i> , 2013 , 425, 58-65	2.8	15

46	Characterization of laser-produced plasma ions of various metals and their effect on the optical properties of the CR-39 polymer. <i>Radiation Effects and Defects in Solids</i> , 2013 , 168, 1-9	0.9	15
45	Effect of UV laser irradiation on the hardness and structural parameters of Ag _x Pd _{1-x} (0.4 ≤ x ≤ 0.6) alloys. <i>Applied Surface Science</i> , 2012 , 259, 740-746	6.7	13
44	The fundamental determining factor of angular emission of multiple charged ions ejected by laser ablation of different metals and their binary alloys. <i>Materials Chemistry and Physics</i> , 2012 , 137, 147-153	4.4	7
43	Effect of Cumulative Nanosecond Laser Pulses on the Plasma Emission Intensity and Surface Morphology of Pt- and Ag-Ion Deposited Silicon. <i>Plasma Science and Technology</i> , 2012 , 14, 333-337	1.5	0
42	On the Change in Work Hardening Characteristics of Molybdenum Polycrystals Due to Natural Aging. <i>Journal of Materials Engineering and Performance</i> , 2011 , 20, 250-256	1.6	1
41	Ablation yield and angular distribution of ablated particles from laser-irradiated metals: The most fundamental determining factor. <i>Applied Surface Science</i> , 2011 , 257, 2854-2860	6.7	21
40	RATE PROCESS OF YIELDING IN SOME BODY-CENTERED CUBIC ALKALI METALS. <i>International Journal of Modern Physics B</i> , 2010 , 24, 4233-4242	1.1	1
39	Correlation between the temperature dependence of yield stress and the nature of solute distribution in Cu ₃ Ni solid solutions. <i>Journal of Alloys and Compounds</i> , 2010 , 498, 102-106	5.7	6
38	Angular distribution of ions produced by laser ablation of magnesium with special reference to sublimation energy. <i>Vacuum</i> , 2010 , 85, 170-175	3.7	10
37	Investigation of laser irradiation effects on the hardness of Al 5086 alloy under different conditions. <i>Vacuum</i> , 2010 , 85, 474-479	3.7	23
36	Investigation of silver plasma and surface morphology from a nanosecond laser ablation. <i>Materials Chemistry and Physics</i> , 2009 , 114, 978-982	4.4	4
35	On the strength and stress-relaxation response of fine-grain Cu _{42.2} at.%Zn _{0.6} at.%Pb alloy polycrystals. <i>Journal of Alloys and Compounds</i> , 2009 , 479, 252-256	5.7	6
34	Microstructural and Hardness Studies of Cu-10wt.%Sn Alloy Under Different Aging Conditions. <i>Journal of Materials Engineering and Performance</i> , 2008 , 17, 123-126	1.6	
33	Effect of heterogeneous solute distribution on the anomalous thermomechanical response of Cu ₃ Ni alloy single crystals below 50 K. <i>Philosophical Magazine Letters</i> , 2007 , 87, 915-922	1	3
32	Analysis of observations on solid-solution hardening in KBr _{0.5} Cl single crystals. <i>Journal of Materials Science</i> , 2007 , 42, 2862-2866	4.3	5
31	Low-temperature anomaly in the creep of lead single crystals. <i>Journal of Materials Science Letters</i> , 2001 , 20, 763-765		1
30	Anomalous grain growth in commercial lead. <i>Journal of Materials Science Letters</i> , 2001 , 20, 637-638		
29	Deformation behavior of nickel-chromium alloys with special reference to the nature of solute distribution. <i>Journal of Materials Science Letters</i> , 2001 , 20, 759-761		7

28	Kinetics of Plastic Deformation in CuBr Single Crystals at Low Temperatures. <i>European Physical Journal D</i> , 2001 , 51, 819-828		1
27	Investigation of the activation-parameters of low-temperature slip in cubic metals. <i>European Physical Journal D</i> , 1999 , 49, 1177-1184		9
26	Effect of mean-square amplitude of atomic vibrations on the creep behaviour of cubic crystals. <i>European Physical Journal D</i> , 1999 , 49, 509-513		4
25	Relation of flow stress to the mean-square amplitude of atomic vibrations in cubic metals. <i>Physical Review B</i> , 1993 , 47, 8418-8424	3.3	12
24	Investigation of the activation parameters of low-temperature slip in anthracene single crystals. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1993 , 67, 1379-1387		3
23	The effect of magnetic field on the scintillation efficiency of organic scintillators. <i>Acta Physica Hungarica</i> , 1992 , 71, 35-44		3
22	Temperature dependence of gamma ray induced luminescence in toluene based liquid scintillator between 220 and 290 K. <i>Acta Physica Hungarica</i> , 1992 , 72, 101		
21	Investigation of the compositional modulations in copper-aluminium alloys. <i>Journal of Materials Science Letters</i> , 1991 , 10, 309-312		8
20	Stress equivalence of solid-solution hardening. <i>Journal of Physics Condensed Matter</i> , 1990 , 2, 5797-5808	1.8	12
19	On the deviation from random distribution of solute atoms in some copper-based alloys. <i>Solid State Communications</i> , 1989 , 72, 139-141	1.6	8
18	Sensitivity of the anomalous yielding behaviour at low temperatures to the nature of solute distribution in solid-solution crystals. <i>Materials Letters</i> , 1989 , 7, 347-349	3.3	10
17	Solid-solution hardening in dilute and concentrated alloys. <i>Philosophical Magazine Letters</i> , 1989 , 60, 141-145		11
16	Power-like dependence of the dislocation velocity on flow stress in the kink-pair model of solid-solution hardening. <i>Journal of Materials Science Letters</i> , 1988 , 7, 1379-1380		3
15	Correlation between temperature dependence of critical resolved shear stress and nature of solute distribution in aluminium-magnesium alloys. <i>Journal of Materials Science Letters</i> , 1988 , 7, 879-880		11
14	Mechanism of stress relaxation in alpha-iron between 77 and 360K. <i>Journal of Materials Science Letters</i> , 1987 , 6, 1055-1056		3
13	Anomalies in flow stress and work-hardening coefficient of polycrystalline metals at low temperatures. <i>Journal of Materials Science Letters</i> , 1987 , 6, 54-56		1
12	Anomalous yielding in alloys at low temperatures. <i>Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties</i> , 1986 , 54, L9-L13		7
11	The peaking effect in the internal friction of copper single crystals. <i>Journal of Materials Science Letters</i> , 1986 , 5, 155-156		1

10	Creep of aluminium single crystals at low temperatures. <i>Journal of Materials Science Letters</i> , 1985 , 4, 302-304	9
9	Effect of anomalous work-hardening on the stress-sensitivity of the relaxation-rate in polycrystalline metals at low temperatures. <i>Journal of Materials Science Letters</i> , 1984 , 3, 955-957	3
8	The concentration and stress dependence of the activation volume for plastic flow in bcc solid solutions. <i>Journal of Materials Science Letters</i> , 1983 , 2, 713-714	3
7	Effect of hydrogen attack on the strength of high purity copper. <i>Journal of Materials Science Letters</i> , 1983 , 2, 1-2	15
6	Anomalies in the mechanical response of metals and alloys at low temperatures. <i>Scripta Metallurgica</i> , 1983 , 17, 1337-1339	10
5	On the correlation between phonon heat capacity and anomalous mechanical response of metallic crystals. <i>Journal Physics D: Applied Physics</i> , 1982 , 15, L141-L144	3
4	Solid-solution hardening in dilute alloys. <i>Acta Metallurgica</i> , 1981 , 29, 829-834	30
3	Solid-solution hardening in hexagonal alloys. <i>Journal of Physics F: Metal Physics</i> , 1981 , 11, L275-L279	7
2	On the spectrum of effective obstacles to thermally activated glide in solid solutions. <i>Journal of Physics F: Metal Physics</i> , 1981 , 11, L59-L63	1
1	Solid-solution hardening. <i>Acta Metallurgica</i> , 1978 , 26, 167-173	54