RÃ´mulo Ribeiro MagalhÃ£es Sousa

List of Publications by Year
in descending order

80 papers	979 citations	516710 16 h-index	501196 28 g-index
81 all docs	81 docs citations	81 times ranked	589 citing authors

#	ARTICLE	IF	CITATIONS
1	Use of cathodic cage in plasma nitriding. Surface and Coatings Technology, 2006, 201, 2450-2454.	4.8	127
2	Evaluation of methylene blue removal by plasma activated palygorskites. Journal of Materials Research and Technology, 2019, 8, 5432-5442.	5.8	64
3	Cathodic cage nitriding of samples with different dimensions. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 465, 223-227.	5.6	54
4	Cathodic cage plasma nitriding (CCPN) of austenitic stainless steel (AISI 316): Influence of the different ratios of the (N2/H2) on the nitrided layers properties. Vacuum, 2012, 86, 2048-2053.	3.5	53
5	Surface modification of M2 steel by combination of cathodic cage plasma deposition and magnetron sputtered MoS2-TiN multilayer coatings. Surface and Coatings Technology, 2020, 384, 125327.	4.8	50
6	Industrial application of AISI 4340 steels treated in cathodic cage plasma nitriding technique. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 479, 142-147.	5.6	48
7	Enhanced wear and corrosion resistance of AISI-304 steel by duplex cathodic cage plasma treatment. Surface and Coatings Technology, 2019, 375, 34-45.	4.8	37
8	Cathodic cage plasma deposition of TiN and TiO2 thin films on silicon substrates. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2015, 33, .	2.1	35
9	Wear and corrosion studies of duplex surface-treated AISI-304 steel by a combination of cathodic cage plasma nitriding and PVD-TiN coating. Ceramics International, 2022, 48, 21473-21482.	4.8	29
10	Nitriding in cathodic cage of stainless steel AISI 316: Influence of sample position. Vacuum, 2009, 83, 1402-1405.	3.5	27
11	Thin Tin and Tio2 Film Deposition in Glass Samples by Cathodic Cage. Materials Research, 2015, 18, 347-352.	1.3	26
12	Ionic nitriding in cathodic cage of AISI 420 martensitic stainless steel. Surface Engineering, 2008, 24, 52-56.	2.2	23
13	Design, manufacturing and plasma nitriding of AISI-M2 steel forming tool and its performance analysis. Journal of Materials Research and Technology, 2020, 9, 14517-14527.	5.8	21
14	Nitriding using cathodic cage technique of austenitic stainless steel AISI 316 with addition of CH4. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 487, 124-127.	5.6	20
15	Synthesis of molybdenum oxide on AISI-316 steel using cathodic cage plasma deposition at cathodic and floating potential. Surface and Coatings Technology, 2021, 406, 126650.	4.8	19
16	Surface modification of tool steel by cathodic cage TiN deposition. Surface Engineering, 2021, 37, 334-342.	2.2	19
17	Nitriding of AISI 1020 steel: comparison between conventional nitriding and nitriding with cathodic cage. Materials Research, 2014, 17, 708-713.	1.3	18
18	Deposition of TiO2 Film on Duplex Stainless Steel Substrate Using the Cathodic Cage Plasma Technique. Materials Research, 2016, 19, 1207-1212.	1.3	18

#	ARTICLE	IF	CITATIONS
19	Cathodic cage nitriding of AISI 409 ferritic stainless steel with the addition of CH4. Materials Research, 2012, 15, 260-265.	1.3	16
20	One-Pot Synthesis of Titanate Nanotubes Decorated with Anatase Nanoparticles Using a Microwave-Assisted Hydrothermal Reaction. Journal of Nanomaterials, 2019, 2019, 1-10.	2.7	16
21	TiO2 anti-corrosive thin films on duplex stainless steel grown using cathodic cage plasma deposition. Surface and Coatings Technology, 2018, 347, 136-141.	4.8	15
22	Uniformity of temperature in cathodic cage technique in nitriding of austenitic stainless steel AISI 316. Surface Engineering, 2008, 24, 313-318.	2.2	13
23	Investigation of the Wettability Using Contact Angle Measurements of Green Polyethylene Flat Films and Expanded Vermiculite Clay Treated by Plasma. Materials Research, 2019, 22, .	1.3	12
24	Morphological analysis of the TiN thin film deposited by CCPN technique. Journal of Materials Research and Technology, 2020, 9, 13945-13955.	5.8	12
25	Evaluation of Aging in Air of Poly (Ethylene Terephthalat) in Oxygen Plasma. Materials Research, 2015, 18, 891-896.	1.3	11
26	Novel synthesis of copper oxide on fabric samples by cathodic cage plasma deposition. Polymers for Advanced Technologies, 2020, 31, 520-526.	3.2	11
27	Enhanced surface properties of M2 steel by plasma nitriding pre-treatment and magnetron sputtered TiN coating. International Journal of Surface Science and Engineering, 2020, 14, 288.	0.4	11
28	Comparative study of structural and stoichiometric properties of titanium nitride films deposited by cathodic cage plasma deposition and magnetron sputtering. European Physical Journal Plus, 2022, 137, 1.	2.6	11
29	Combined plasma treatment of AISI-1045 steel by hastelloy deposition and plasma nitriding. Journal of Building Engineering, 2022, 47, 103882.	3.4	10
30	Cathodic Cage Plasma Nitriding: An Innovative Technique. Journal of Metallurgy, 2012, 2012, 1-6.	1.1	9
31	Surface modification of AISI-304 steel by ZnO synthesis using cathodic cage plasma deposition. Materials Research Express, 2021, 8, 096403.	1.6	9
32	Cathodic cage plasma nitriding of austenitic stainless steel (AISI 316): influence of the working pressure on the nitrided layers properties. Materials Research, 2014, 17, 427-433.	1.3	9
33	Novel antibacterial silver coating on PET fabric assisted with hollowâ€cathode glow discharge. Polymers for Advanced Technologies, 2020, 31, 2896-2905.	3.2	8
34	Synthesis of TiN and TiO2 thin films by cathodic cage plasma deposition: a brief review. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2020, 42, 1.	1.6	8
35	Plasma nitriding of AISI M2 steel: performance evaluation in forming tools. Surface Engineering, 2020, 36, 508-515.	2.2	8
36	Internal coating of pipes using the cathodic cage plasma nitriding technique. Surfaces and Interfaces, 2020, 21, 100691.	3.0	8

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37	Duplex treatment with Hastelloy cage on AISI 5160 steel cutting tools. Materials Science and Technology, 2022, 38, 499-506.	1.6	8
38	Deposition of MoS2-TiN Multilayer Films on 1045 Steel to Improve Common Rail Injection System. Journal of Materials Engineering and Performance, 2020, 29, 6740-6747.	2.5	7
39	Study of High-Density Polyethylene (HDPE) Kinetics Modification Treated by Dielectric Barrier Discharge (DBD) Plasma. Polymers, 2020, 12, 2422.	4.5	7
40	Novel synthesis of molybdenum nitride/oxide on AISI-316 steel assisted with active screen plasma treatment. Materials Research Express, 2019, 6, 116501.	1.6	6
41	Influence of Hastelloyâ€™s Cathodic Cage Plasma Deposition on Corrosion Resistance of AISI 304 Stainless Steel and of AISI D6 Tool Steel. Materials Research, 2021, 24, .	1.3	5
42	NitretaÃ§Ã£o em gaiola catÃ³dica: influÃªncia do tempo de tratamento. Revista Materia, 2008, 13, 119-124.	0.2	5
43	Structural and Optical Properties of ZnO:Al Thin Films Produced by Magnetron Sputtering with Different Oxygen Flow: An Experimental and Ab Initio Study. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 2000167.	1.8	4
44	Synthesis and characterization of ZnO/ZnAl2O4/Zn2TiO4 composite films by Arâ€“O2 mixture hollow cathode glow discharge. Journal of Materials Research and Technology, 2021, 12, 2426-2437.	5.8	4
45	Plasma duplex treatment influence on the tribological properties of the UNS S32760 stainless steel. Surface and Coatings Technology, 2021, 426, 127774.	4.8	4
46	The Effect of Cathodic Cage Plasma TiN Deposition on Surface Properties of Conventional Plasma Nitrided AISI-M2 Steel. Metals, 2022, 12, 961.	2.3	4
47	Nitriding using cathodic cage technique of martensitic stainless steel AISI 420 with addition of CH4. Revista Materia, 2008, 13, 342-347.	0.2	3
48	Deposition of fine copper film on samples placed internally and externally to the cathodic cage. International Journal of Materials Research, 2019, 110, 275-280.	0.3	3
49	Optical-Electrical Properties and Thickness Analysis of TiO2 Thin Films Obtained by Magnetron Sputtering. Brazilian Journal of Physics, 2020, 50, 771-779.	1.4	3
50	Influence of the plasma nitriding conditions on the chemical and morphological characteristics of TiN coatings deposited on silicon. Revista Brasileira De AplicaÃ§Ãµes De VÃ¡cuo, 2018, 37, 44.	0.1	3
51	Desenvolvimento de um equipamento para ensaio de fadiga tÃ©rmica. Revista Materia, 2009, 14, 749-758.	0.2	2
52	NitretaÃ§Ã£o iÃ´nica em gaiola catÃ³dica do aÃ§o ferramenta tipo AISI D2 para trabalho a frio. Revista Materia, 2009, 14, 861-868.	0.2	2
53	Triple langmuir probe, optical emission spectroscopy and lissajous figures for diagnosis of plasma produced by dielectric barrier discharge of parallel plates in atmospheric pressure. International Journal of Applied Electromagnetics and Mechanics, 2020, 63, 315-325.	0.6	2
54	Enhanced Wear Resistance of AISI-316 Steel by Low-Temperature Molybdenum Cathodic Cage Plasma Deposition. Journal of Materials Engineering and Performance, 2021, 30, 8947-8955.	2.5	2

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55	Growth of Î±-Fe2O3 thin films by plasma deposition: Studies of structural, morphological, electrochemical, and thermal-optical properties. Thin Solid Films, 2021, 736, 138919.	1.8	2
56	DEPOSIÃ‡ÃƒO DE FILMES FINOS DE COBRE POR GAIOLA CATÃ“DICA: ANÃLISE DO CONFINAMENTO DO PLASMA EM FUNÃ‡ÃƒO DO AUMENTO DA ESPESSURA DA TAMPA DA GAIOLA CATÃ“DICA. Tecnologia Em Metalurgia, Materiais E Mineracao, 2018, 15, 296-302.	0.2	2
57	NitretaÃ§Ã£o iÃ´nica em gaiola catÃ³dica do aÃ§o inoxidÃ¡vel martensÃtico AISI 420. Revista Materia, 2008, 13, 104-109.	0.2	2
58	Molybdenum Oxide Coatings Deposited on Plasma Nitrided Surfaces. Materials Research, 0, 25, .	1.3	2
59	Effect of plasma nitriding time on the structural and mechanical properties of AISIâ€O1 steel. Engineering Reports, 2020, 2, e12279.	1.7	1
60	Surface modification of PET fabric by plasma preâ€treatment for longâ€lasting permethrin deposition. Polymers for Advanced Technologies, 2020, 31, 2229.	3.2	1
61	Corrosion Resistance and Microstructural Evaluation of a Plasma Nitrided Weld Joint of UNS S32750 Super Duplex Stainless Steel. Materials Research, 2021, 24, .	1.3	1
62	NitretaÃ§Ã£o e deposiÃ§Ã£o por plasma em ferramentas de aÃ§os AISI M2 e D2 utilizadas na conformaÃ§Ã£o e estampagem de pregos: um estudo de viabilidade. Revista Materia, 2021, 26, .	0.2	1
63	Influence of Hastelloyâ€™s Cathodic Cage Plasma Deposition on Corrosion Resistance of AISI 304 Stainless Steel and of AISI D6 Tool Steel. Materials Research, 2021, 24, .	1.3	1
64	Synthesis of Al-Doped ZnO Films Assisted with Hollow-Cathode Glow Discharge and Their Characterization. Journal of Electronic Materials, 2021, 50, 2687-2698.	2.2	1
65	Evaluation of Corrosion Resistance of Thin Films Formed on AISI 316L Steel by Plasma Using Hastelloy as Cathodic Cage. Physica Status Solidi (A) Applications and Materials Science, 2021, 218, 2000578.	1.8	1
66	Analysis Structural Modification and Opticalâ€“Electrical Properties of Al-Doped ZnO Oxide Films Deposited by Magnetron Sputtering. Brazilian Journal of Physics, 2021, 51, 1677-1688.	1.4	1
67	Fabrication and characterization of ZnO/Zn2TiO4/ZnAl2O4 composite films by using magnetron sputtering with ceramic targets. Physica B: Condensed Matter, 2021, , 413535.	2.7	1
68	EFFECT OF LOW-PRESSURE PLASMA TREATMENT ON THE SEED SURFACE STRUCTURE OF Desmanthus virgatus L. WILLD.. Revista Arvore, 0, 46, .	0.5	1
69	Study of the deposition of hydroxyapatite by plasma electrolytic oxidation (PEO) in stainless steel AISI 316LVM samples. Journal of Materials Research and Technology, 2022, 18, 1578-1589.	5.8	1
70	Nanocomposites Thin Films: Manufacturing and Applications. , 0, , .		1
71	Carbonitriding: Plasma. , 2016, , 567-572.		0
72	PROSPECÃ‡ÃƒO TECNOLÃ“GICA: DEPOSIÃ‡ÃƒO POR PLASMA EM GAIOLA CATÃ“DICA EM PASTILHAS REVESTIDAS DE METAL DURO / TECHNOLOGICAL PROSPECTION: CATHODIC CAGE PLASMA DEPOSITION IN HARD METAL DISCS. Brazilian Journal of Development, 2021, 7, 19421-19427.	0.1	0

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73	EvoluÃ§Ã£o microestrutural do revestimento de aÃ§o inoxidÃ¡vel martensÃtico 423Co submetido ao ensaio de fadiga tÃ©rmica. Revista Materia, 2011, 16, 714-729.	0.2	0
74	AvaliaÃ§Ã£o do efeito do tratamento a plasma sobre a superfÃcie de filmes de polietileno verde e argila vermiculita. Revista Materia, 2019, 24, .	0.2	0
75	NitretaÃ§Ã£o a plasma da junta soldada do aÃ§o inoxidÃ¡vel super duplex SAF 2507. Revista Materia, 2019, 24, .	0.2	0
76	Investigation of FeN and TiN thin films properties for possible application in electronic devices. Revista Brasileira De AplicaÃ§Ãµes De VÃ¡cuo, 2019, 38, 32.	0.1	0
77	DeposiÃ§Ã£o de filmes carbonosos em aÃ§o AISI D6 atravÃ©s da tÃ©cnica de gaiola catÃ³dica. Revista Materia, 2020, 25, .	0.2	0
78	Processamento de aÃ§o API 5L X70 por laminaÃ§Ã£o a morno e nitretaÃ§Ã£o a plasma. Revista Materia, 2020, 25, .	0.2	0
79	Estudo de nitretaÃ§Ã£o a plasma e tratamento duplex em brocas de aÃ§o rÃ¡pido. Revista Materia, 2020, 25, .	0.2	0
80	Germination, wettability, and imbibition of dormant seeds of Desmanthus virgatus after low-pressure plasma treatment. Acta Veterinaria Brasilica, 2022, 16, 71-77.	0.1	0