Matiar M R Howlader

List of Publications by Year
in descending order

54 papers	1,901 citations	279798 23 h-index	254184 43 g-index
55 all docs	55 docs citations	55 times ranked	2296 citing authors

#	Article	IF	Citations
1	Electrochemical sensing of acetaminophen using multi-walled carbon nanotube and Î²-cyclodextrin. Sensors and Actuators B: Chemical, 2018, 254, 896-909.	7.8	154
2	Microfabricated electrochemical pH and free chlorine sensors for water quality monitoring: recent advances and research challenges. RSC Advances, 2015, 5, 69086-69109.	3.6	144
3	Polymer integration for packaging of implantable sensors. Sensors and Actuators B: Chemical, 2014, 202, 758-778.	7.8	136
4	Polymers and organic materials-based pH sensors for healthcare applications. Progress in Materials Science, 2018, 96, 174-216.	32.8	122
5	Oxygen Plasma and Humidity Dependent Surface Analysis of Silicon, Silicon Dioxide and Glass for Direct Wafer Bonding. ECS Journal of Solid State Science and Technology, 2013, 2, P515-P523.	1.8	109
6	Inkjet Printing of a Highly Loaded Palladium Ink for Integrated, Lowâ€Cost pH Sensors. Advanced Functional Materials, 2016, 26, 4923-4933.	14.9	76
7	Fabrication of highly sensitive Bisphenol A electrochemical sensor amplified with chemically modified multiwall carbon nanotubes and Î²-cyclodextrin. Sensors and Actuators B: Chemical, 2020, 320, 128319.	7.8	74
8	Integrated water quality monitoring system with pH, free chlorine, and temperature sensors. Sensors and Actuators B: Chemical, 2018, 255, 781-790.	7.8	72
9	Room temperature wafer level glass/glass bonding. Sensors and Actuators A: Physical, 2006, 127, 31-36.	4.1	70
10	Wafer Level Surface Activated Bonding Tool for MEMS Packaging. Journal of the Electrochemical Society, 2004, 151, G461.	2.9	67
11	Tailoring MWCNTs and Î²-Cyclodextrin for Sensitive Detection of Acetaminophen and Estrogen. ACS Applied Materials & Interfaces, 2018, 10, 21411-21427.	8.0	66
12	Glutamate sensing in biofluids: recent advances and research challenges of electrochemical sensors. Analyst, The, 2020, 145, 321-347.	3.5	63
13	Inkjet-printed bifunctional carbon nanotubes for pH sensing. Materials Letters, 2016, 176, 68-70.	2.6	58
14	Electrochemical Sensing of Cannabinoids in Biofluids: A Noninvasive Tool for Drug Detection. ACS Sensors, 2020, 5, 620-636.	7.8	50
15	Electrochemical sensing of lead in drinking water using Î²-cyclodextrin-modified MWCNTs. Sensors and Actuators B: Chemical, 2019, 296, 126632.	7.8	49
16	Characterization of the bonding strength and interface current of p-Si/n-InP wafers bonded by surface activated bonding method at room temperature. Journal of Applied Physics, 2002, 91, 3062-3066.	2.5	48
17	Electrochemical sensing: A prognostic tool in the fight against COVID-19. TrAC - Trends in Analytical Chemistry, 2021, 136, 116198.	11.4	40
18	Void-free strong bonding of surface activated silicon wafers from room temperature to annealing at 600Â°C. Thin Solid Films, 2010, 519, 804-808.	1.8	36

#	Article	IF	Citations
19	Hybrid plasma bonding for void-free strong bonded interface of silicon/glass at 200Â°C. Talanta, 2010, 82, 508-515.	5.5	33
20	Comprehensive investigation of sequential plasma activated Si/Si bonded interfaces for nano-integration on the wafer scale. Nanotechnology, 2010, 21, 134011.	2.6	28
21	Investigation of bonding strength and sealing behavior of aluminum/stainless steel bonded at room temperature. Vacuum, 2010, 84, 1334-1340.	3.5	27
22	Role of Heating on Plasma-Activated Silicon Wafers Bonding. Journal of the Electrochemical Society, 2009, 156, H846.	2.9	25
23	Paper-Based, Hand-Drawn Free Chlorine Sensor with Poly(3,4-ethylenedioxythiophene):Poly(styrenesulfonate). Analytical Chemistry, 2016, 88, 10384-10389.	6.5	25
24	Charge transfer and stability of implantable electrodes on flexible substrate. Sensors and Actuators B: Chemical, 2013, 178, 132-139.	7.8	24
25	Low-temperature solution processing of palladium/palladium oxide films and their pH sensing performance. Talanta, 2016, 146, 517-524.	5.5	23
26	Thermoelectric generation via tellurene for wearable applications: recent advances, research challenges, and future perspectives. Materials Today Energy, 2021, 20, 100625.	4.7	23
27	Materials analyses and electrochemical impedance of implantable metal electrodes. Physical Chemistry Chemical Physics, 2015, 17, 10135-10145.	2.8	22
28	The electrical conductivity of zircaloy oxide films. Journal of Nuclear Materials, 1998, 253, 149-155.	2.7	18
29	Influence of nitrogen microwave radicals on sequential plasma activated bonding. Materials Letters, 2010, 64, 445-448.	2.6	18
30	Integration of Heterogeneous Materials for Wearable Sensors. Polymers, 2018, 10, 60.	4.5	18
31	In situ measurement of electrical conductivity of alumina under electron irradiation in a high voltage electron microscope. Journal of Nuclear Materials, 1996, 239, 245-252.	2.7	17
32	Surface and Interface Characterization of Sequentially Plasma Activated Silicon, Silicon dioxide and Germanium Wafers for Low Temperature Bonding Applications. ECS Transactions, 2010, 33, 329-338.	0.5	17
33	Sequential Plasma-Activated Bonding Mechanism of Silicon/Silicon Wafers. Journal of Microelectromechanical Systems, 2010, 19, 840-848.	2.5	16
34	Hybrid plasma bonding of germanium and glass wafers at low temperature. Materials Letters, 2010, 64, 1532-1535.	2.6	15
35	Nonenzymatic electrochemical sensors via Cu native oxides (CuNOx) for sweat glucose monitoring. Sensing and Bio-Sensing Research, 2021, 34, 100453.	4.2	15
36	Electrical conductivity of Wesgo AL995 alumina under fast electron irradiation in a high voltage electron microscope. Journal of Applied Physics, 2002, 92, 1995-1999.	2.5	13

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37	Low-Temperature Bonding for Silicon-Based Micro-Optical Systems. Photonics, 2015, 2, 1164-1201.	2.0	12
38	Direct bonding of copper and liquid crystal polymer. Materials Letters, 2018, 212, 214-217.	2.6	11
39	Annealing Temperature-Dependent Interfacial Behavior of Sequentially Plasma-Activated Silicon Bonded Wafers. Journal of Microelectromechanical Systems, 2011, 20, 17-20.	2.5	10
40	Formation of gallium arsenide nanostructures in Pyrex glass. Nanotechnology, 2013, 24, 315301.	2.6	9
41	In situ measurement of electrical conductivity of Zircaloy oxides and their formation mechanism under electron irradiation. Journal of Nuclear Materials, 1999, 265, 100-107.	2.7	8
42	Nanobonding: A key technology for emerging applications in health and environmental sciences. Japanese Journal of Applied Physics, 2015, 54, 030201.	1.5	8
43	Low temperature nanointegration for emerging biomedical applications. Microelectronics Reliability, 2012, 52, 361-374.	1.7	7
44	Morphology and electrical properties of inkjet-printed palladium/palladium oxide. Journal of Materials Chemistry C, 2017, 5, 1893-1902.	5.5	7
45	Copper and liquid crystal polymer bonding towards lead sensing. Japanese Journal of Applied Physics, 2018, 57, 02BB03.	1.5	6
46	Role of specimen thickness on the electrical conductivity of single crystalline alumina under electron irradiation. Journal of Applied Physics, 2001, 89, 1612.	2.5	3
47	Annealed proton-exchanged LiNbO 3 ridge waveguide for photonics application. , 2010, , .		2
48	Bonding mechanism and electrochemical impedance of directly bonded liquid crystal polymer and copper. , 2017, , .		2
49	Future nano- and micro-systems using nanobonding technologies. , 2014, , .		1
50	Nanocrystalline diamond films prepared by pulsed electron beam ablation on different substrates. Journal of Materials Research, 2016, 31, 1964-1971.	2.6	1
51	Integration of Two-Dimensional Materials: Recent Advances and Challenges. , 2019, , .		1
52	Surface-Activated Bonding of Aluminum/Stainless Steel and Its Seal Characteristics. Journal of the Japan Society for Technology of Plasticity, 2006, 47, 596-600.	0.3	0
53	Nanobonding - A key technology for emerging applications in health and environmental sciences. , 2014, , .		0
54	Sweat Glucose Sensing by Directly Bonded Thin Films. , 2019, , .		0