Ester Segal

List of Publications by Year
in descending order

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110 papers	3,926 citations	94415 37 h-index	133244 59 g-index
115 all docs	115 docs citations	115 times ranked	4325 citing authors

#	Article	IF	Citations
1	Polyanilineâ€“DBSA/organophilic clay nanocomposites: synthesis and characterization. Synthetic Metals, 2002, 128, 115-120.	3.9	162
2	Oxidation-Triggered Release of Fluorescent Molecules or Drugs from Mesoporous Si Microparticles. ACS Nano, 2008, 2, 2401-2409.	14.6	148
3	Porous Silicon-Based Photonic Biosensors: Current Status and Emerging Applications. Analytical Chemistry, 2019, 91, 441-467.	6.5	141
4	Polymerization of aniline in the presence of DBSA in an aqueous dispersion. Synthetic Metals, 1999, 106, 59-66.	3.9	140
5	Confinement of Thermoresponsive Hydrogels in Nanostructured Porous Silicon Dioxide Templates. Advanced Functional Materials, 2007, 17, 1153-1162.	14.9	124
6	Active food packaging films with synergistic antimicrobial activity. Food Control, 2017, 76, 117-126.	5.5	120
7	Construction and Characterization of Porous SiO₂/Hydrogel Hybrids as Optical Biosensors for Rapid Detection of Bacteria. Advanced Functional Materials, 2010, 20, 2269-2277.	14.9	113
8	Polyanilineâ€“DBSA/polymer blends prepared via aqueous dispersions. Synthetic Metals, 2000, 110, 189-193.	3.9	111
9	Engineering Nanostructured Porous SiO₂ Surfaces for Bacteria Detection via â€œDirect Cell Captureâ€• Analytical Chemistry, 2011, 83, 3282-3289.	6.5	111
10	Nanostructured porous siliconâ€“polymer-based hybrids: from biosensing to drug delivery. Nanomedicine, 2011, 6, 1755-1770.	3.3	103
11	Mechanism of erosion of nanostructured porous silicon drug carriers in neoplastic tissues. Nature Communications, 2015, 6, 6208.	12.8	97
12	Recent Advances in the Race to Design a Rapid Diagnostic Test for Antimicrobial Resistance. ACS Sensors, 2018, 3, 2202-2217.	7.8	93
13	Label-Free Optical Biosensors Based on Aptamer-Functionalized Porous Silicon Scaffolds. Analytical Chemistry, 2015, 87, 1999-2006.	6.5	87
14	Electrically conductive composites based on epoxy resin with polyaniline-DBSA fillers. Synthetic Metals, 2003, 132, 269-278.	3.9	86
15	Whole-cell detection of live lactobacillus acidophilus on aptamer-decorated porous silicon biosensors. Analyst, The, 2016, 141, 5432-5440.	3.5	66
16	Polystyrene/polyaniline nanoblends for sensing of aliphatic alcohols. Sensors and Actuators B: Chemical, 2005, 104, 140-150.	7.8	65
17	Aptamers vs. antibodies as capture probes in optical porous silicon biosensors. Analyst, The, 2020, 145, 4991-5003.	3.5	62
18	Local Heating of Discrete Droplets Using Magnetic Porous Silicon-Based Photonic Crystals. Journal of the American Chemical Society, 2006, 128, 7938-7946.	13.7	61

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19	Porous Silicon-Based Biosensors: Towards Real-Time Optical Detection of Target Bacteria in the Food Industry. Scientific Reports, 2016, 6, 38099.	3.3	60
20	Sensing of liquids by electrically conductive immiscible polypropylene/thermoplastic polyurethane blends containing carbon black. Journal of Polymer Science, Part B: Polymer Physics, 2003, 41, 1428-1440.	2.1	59
21	Antibacterial and antifungal LDPE films for active packaging. Polymers for Advanced Technologies, 2015, 26, 110-116.	3.2	59
22	Oxidized Porous Silicon Nanostructures Enabling Electrokinetic Transport for Enhanced DNA Detection. Advanced Functional Materials, 2015, 25, 6725-6732.	14.9	58
23	Halloysite nanotubes â€“ the nano-bio interface. Nanoscale, 2020, 12, 23444-23460.	5.6	56
24	Preparation and Characterization of a pHâ€•and Thermally Responsive Poly(Nâ€•isopropylacrylamideâ€•coâ€•acrylic acid)/Porous SiO₂ Hybrid. Advanced Functional Materials, 2010, 20, 826-833.	14.9	54
25	Thermoplastic polyurethane-carbon black compounds: Structure, electrical conductivity and sensing of liquids. Polymer Engineering and Science, 2002, 42, 2430-2439.	3.1	51
26	Unraveling Antimicrobial Susceptibility of Bacterial Networks on Micropillar Architectures Using Intrinsic Phase-Shift Spectroscopy. ACS Nano, 2017, 11, 6167-6177.	14.6	51
27	Aptasensors versus immunosensorsâ€”Which will prevail?. Engineering in Life Sciences, 2022, 22, 319-333.	3.6	51
28	Active packaging containing encapsulated carvacrol for control of postharvest decay. Postharvest Biology and Technology, 2016, 118, 175-182.	6.0	50
29	Aptasensors for Point-of-Care Detection of Small Molecules. Biosensors, 2020, 10, 108.	4.7	48
30	Lab-on-a-Chip Devices for Point-of-Care Medical Diagnostics. Advances in Biochemical Engineering/Biotechnology, 2020, , 247-265.	1.1	47
31	Detection of trace heavy metal ions in water by nanostructured porous Si biosensors. Analyst, The, 2015, 140, 4507-4514.	3.5	45
32	Engineering porous silicon nanostructures as tunable carriers for mitoxantrone dihydrochloride. Acta Biomaterialia, 2013, 9, 6208-6217.	8.3	44
33	Antimicrobial Carvacrol-Containing Polypropylene Films: Composition, Structure and Function. Polymers, 2018, 10, 79.	4.5	43
34	Biocatalytic carbon nanotube paper: a â€˜one-potâ€™ route for fabrication of enzyme-immobilized membranes for organophosphate bioremediation. Journal of Materials Chemistry B, 2014, 2, 915-922.	5.8	42
35	Trap and track: designing self-reporting porous Si photonic crystals for rapid bacteria detection. Analyst, The, 2014, 139, 3885-3894.	3.5	42
36	Combination of CuO nanoparticles and fluconazole: preparation, characterization, and antifungal activity against Candida albicans. Journal of Nanoparticle Research, 2015, 17, 1.	1.9	42

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37	Rapid and label-free detection of protein a by aptamer-tethered porous silicon nanostructures. Journal of Biotechnology, 2017, 257, 171-177.	3.8	41
38	Prolonged controlled delivery of nerve growth factor using porous silicon nanostructures. Journal of Controlled Release, 2017, 257, 51-59.	9.9	41
39	Picking up the Pieces: A Generic Porous Si Biosensor for Probing the Proteolytic Products of Enzymes. Analytical Chemistry, 2013, 85, 1951-1956.	6.5	37
40	On Chip Protein Pre-Concentration for Enhancing the Sensitivity of Porous Silicon Biosensors. ACS Sensors, 2017, 2, 1767-1773.	7.8	37
41	LDPE/clay/carvacrol nanocomposites with prolonged antimicrobial activity. Journal of Applied Polymer Science, 2015, 132, .	2.6	36
42	Electrically conductive composites based on epoxy resin containing polyaniline-DBSA- and polyaniline-DBSA-coated glass fibers. Journal of Applied Polymer Science, 2004, 91, 1329-1334.	2.6	35
43	Bombarding Cancer: Biolistic Delivery of therapeutics using Porous Si Carriers. Scientific Reports, 2013, 3, 2499.	3.3	33
44	Mass Transfer Limitations of Porous Silicon-Based Biosensors for Protein Detection. ACS Sensors, 2020, 5, 3058-3069.	7.8	33
45	Dual-Functionalized Porous Si/Hydrogel Hybrid for Label-Free Biosensing of Organophosphorus Compounds. Analytical Chemistry, 2013, 85, 7353-7360.	6.5	32
46	Mathematical modeling of drug release from nanostructured porous Si: Combining carrier erosion and hindered drug diffusion for predicting release kinetics. Acta Biomaterialia, 2013, 9, 8346-8353.	8.3	32
47	Nanostructured Porous Si Optical Biosensors: Effect of Thermal Oxidation on Their Performance and Properties. ACS Applied Materials & Interfaces, 2014, 6, 16049-16055.	8.0	32
48	Optical biosensors for bacteria detection by a peptidomimetic antimicrobial compound. Analyst, The, 2015, 140, 7726-7733.	3.5	32
49	Optical biosensing of bacteria and cells using porous silicon based, photonic lamellar gratings. Applied Physics Letters, 2013, 103, .	3.3	31
50	Neuroprotective Effect of Nerve Growth Factor Loaded in Porous Silicon Nanostructures in an Alzheimer's Disease Model and Potential Delivery to the Brain. Small, 2019, 15, e1904203.	10.0	30
51	Synthesis and characterization of a nanostructured porous silicon/carbon dot-hybrid for orthogonal molecular detection. NPG Asia Materials, 2018, 10, e463-e463.	7.9	29
52	Increased surface area of halloysite nanotubes due to surface modification predicts lung inflammation and acute phase response after pulmonary exposure in mice. Environmental Toxicology and Pharmacology, 2020, 73, 103266.	4.0	28
53	3D-printed microfluidics integrated with optical nanostructured porous aptasensors for protein detection. Mikrochimica Acta, 2021, 188, 67.	5.0	28
54	Highly-Tunable Polymer/Carbon Nanotubes Systems: Preserving Dispersion Architecture in Solid Composites via Rapid Microfiltration. ACS Macro Letters, 2012, 1, 848-852.	4.8	27

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55	Occupational exposure during handling and loading of halloysite nanotubes â€“ A case study of counting nanofibers. NanoImpact, 2018, 10, 153-160.	4.5	26
56	Chemical sensing materials based on electrically-conductive immiscible polymer blends. Polymer International, 2005, 54, 1065-1075.	3.1	25
57	DNA-directed immobilization of horseradish peroxidase onto porous SiO2 optical transducers. Nanoscale Research Letters, 2012, 7, 443.	5.7	25
58	Antimicrobial LDPE/EVOH Layered Films Containing Carvacrol Fabricated by Multiplication Extrusion. Polymers, 2018, 10, 864.	4.5	25
59	Polymerization of anilinium/DBSA in the presence of clay particles: Catalysis and encapsulation. Polymer Engineering and Science, 2000, 40, 1915-1920.	3.1	22
60	Polymerization of anilinium-DBSA in the presence of clay particles: kinetics and formation of core-shell structures. Polymers for Advanced Technologies, 2002, 13, 16-24.	3.2	22
61	Grafting stimuliâ€responsive polymer brushes to freshlyâ€etched porous silicon. Physica Status Solidi C: Current Topics in Solid State Physics, 2009, 6, 1717-1720.	0.8	22
62	Porous silicon-based polymer replicas formed by bead patterning. Physica Status Solidi (A) Applications and Materials Science, 2007, 204, 1383-1387.	1.8	21
63	Advancing Nanostructured Porous Si-Based Optical Transducers for Label Free Bacteria Detection. Advances in Experimental Medicine and Biology, 2012, 733, 37-45.	1.6	21
64	Hydrogels synthesized in electrochemically machined porous Si hosts: effect of nano-scale confinement on polymer properties. Soft Matter, 2012, 8, 9166.	2.7	19
65	Characterization of surface phenomena: probing early stage degradation of lowâ€density polyethylene films. Polymer Engineering and Science, 2019, 59, E129.	3.1	19
66	Tethered Lipid Bilayers within Porous Si Nanostructures: A Platform for (Optical) Real-Time Monitoring of Membrane-Associated Processes. Langmuir, 2015, 31, 5244-5251.	3.5	17
67	Bone Morphogenic Protein 2-Loaded Porous Silicon Carriers for Osteoinductive Implants. Pharmaceutics, 2019, 11, 602.	4.5	17
68	Morlet Wavelet Filtering and Phase Analysis to Reduce the Limit of Detection for Thin Film Optical Biosensors. ACS Sensors, 2021, 6, 2967-2978.	7.8	17
69	Structure and properties of multi-walled carbon nanotube porous sheets with enhanced elongation. Journal of Materials Science, 2012, 47, 6131-6140.	3.7	16
70	Designing porous silicon-based microparticles as carriers for controlled delivery of mitoxantrone dihydrochloride. Journal of Materials Research, 2013, 28, 231-239.	2.6	16
71	Aptamer-based detection of adenosine triphosphate via qPCR. Talanta, 2017, 172, 199-205.	5.5	15
72	Porous silicon for cancer therapy: from fundamental research to the clinic. Reviews in Chemical Engineering, 2015, 31, .	4.4	14

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73	Correlating chemical and physical changes of photo-oxidized low-density polyethylene to the activation energy of water release. Polymer Testing, 2017, 64, 194-199.	4.8	14
74	Online analysis of protein inclusion bodies produced in E. coli by monitoring alterations in scattered and reflected light. Applied Microbiology and Biotechnology, 2016, 100, 4147-4159.	3.6	13
75	Porous Silicon Bragg Reflector/Carbon Dot Hybrids: Synthesis, Nanostructure, and Optical Properties. Frontiers in Chemistry, 2018, 6, 574.	3.6	12
76	Antifungal Susceptibility Testing of Aspergillus niger on Silicon Microwells by Intensity-Based Reflectometric Interference Spectroscopy. ACS Infectious Diseases, 2020, 6, 2560-2566.	3.8	12
77	Porous Silicon Optical Biosensors. , 2014, , 857-868.		12
78	Antibody-Functionalized Halloysite Nanotubes for Targeting Bacterial Cells. ACS Applied Bio Materials, 2021, 4, 4094-4104.	4.6	11
79	Acid-etched Halloysite nanotubes as superior carriers for ciprofloxacin. Applied Clay Science, 2022, 228, 106629.	5.2	11
80	Porous Silicon-Based Aptasensors: Toward Cancer Protein Biomarker Detection. ACS Measurement Science Au, 2021, 1, 82-94.	4.4	10
81	Optical Detection of E. coli Bacteria by Mesoporous Silicon Biosensors. Journal of Visualized Experiments, 2013, , e50805.	0.3	8
82	Shining light in blind alleys: deciphering bacterial attachment in silicon microstructures. Nanoscale Horizons, 2022, 7, 729-742.	8.0	8
83	Label-free optical monitoring of proteolytic reaction products using nanoporous silica colloidal assembly. Sensors and Actuators B: Chemical, 2018, 262, 796-800.	7.8	7
84	Paving the Way to Overcome Antifungal Drug Resistance: Current Practices and Novel Developments for Rapid and Reliable Antifungal Susceptibility Testing. Small Methods, 2021, 5, e2100713.	8.6	7
85	Designing Bacterial Chemotactic Receptors Guided by Photonic Femtoliter Well Arrays for Quantifiable, Label-Free Measurement of Bacterial Chemotaxis. ACS Biomaterials Science and Engineering, 2019, 5, 603-612.	5.2	6
86	Electrically conductive sensors for liquids based on ternary immiscible polymer blends containing polyaniline. Polymers for Advanced Technologies, 2004, 15, 573-582.	3.2	5
87	Electrically conductive sensors for liquids based on quaternary ethylene vinyl acetate (EVA)/copolyamide/maleated-EVA/polyaniline blends. Journal of Applied Polymer Science, 2006, 101, 110-117.	2.6	5
88	Compatibility of cancer cells with nanostructured oxidized porous silicon substrates. Physica Status Solidi C: Current Topics in Solid State Physics, 2011, 8, 1903-1907.	0.8	5
89	Porous Silicon Optical Biosensors. , 2014, , 1-11.		5
90	Rapid diagnostic susceptibility testing of bacteria and fungi from clinical samples using silicon gratings. , 2019, , .		5

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91	Porous Silicon Biosensors Employing Emerging Capture Probes. Springer Series in Materials Science, 2015, , 93-116.	0.6	4
92	Designing Porous Silicon Films as Carriers of Nerve Growth Factor. Journal of Visualized Experiments, 2019, , .	0.3	3
93	Polymer - Porous Silicon Composites. , 2014, , 187-198.		2
94	Light-triggered antifouling coatings for porous silicon optical transducers. Polymers for Advanced Technologies, 2017, 28, 859-866.	3.2	2
95	Porous Silicon Polymer Composites. , 2018, , 269-280.		2
96	Design considerations of aptasensors for continuous monitoring of biomarkers in digestive tract fluids. Talanta, 2022, 239, 123124.	5.5	2
97	Electrical Conductivity of High Impact Polystyrene/Liquid Crystalline Polymer/ Carbon Black Ternary Systems. Materials Research Society Symposia Proceedings, 2002, 725, 1.	0.1	1
98	Surface Engineered Porous Silicon-based Nanostructures for Cancer Therapy. Materials Research Society Symposia Proceedings, 2012, 1416, 31.	0.1	1
99	Biosensor based on DNA directed immobilization of enzymes onto optically sensitive porous Si. Materials Research Society Symposia Proceedings, 2013, 1569, 195-200.	0.1	1
100	Polymer: Porous Silicon Composites. , 2014, , 1-10.		1
101	Optical Biosensors: Oxidized Porous Silicon Nanostructures Enabling Electrokinetic Transport for Enhanced DNA Detection (Adv. Funct. Mater. 43/2015). Advanced Functional Materials, 2015, 25, 6824-6824.	14.9	1
102	Porous Silicon-Polymer Composites. , 2017, , 1-12.		1
103	Unraveling bacterial networks and their antimicrobial susceptibility on silicon microarchitectures using intrinsic phase-shift spectroscopy. , 2018, , .		1
104	Functional Nanostructured Porous Si/Hydrogel Hybrids: Synthesis, Characterization and Applications. Materials Research Society Symposia Proceedings, 2012, 1403, 108.	0.1	0
105	Highly-Tunable Polymer/CNTs Nanostructures: A Rapid and Facile Approach for Controlled Architecture and Composition. Materials Research Society Symposia Proceedings, 2013, 1505, 1.	0.1	0
106	Porous Materials: Neuroprotective Effect of Nerve Growth Factor Loaded in Porous Silicon Nanostructures in an Alzheimer's Disease Model and Potential Delivery to the Brain (Small 45/2019). Small, 2019, 15, 1970245.	10.0	0
107	Semiconducting silicon nanowires and nanowire composites for biosensing and therapy. , 2022, , 363-378.		0
108	1,000-fold Sensitivity Enhancement of Porous Si-based Optical Biosensors for Nucleic Acid and Proteins Detection. , 2017, , .		0

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109	Porous Silicon Polymer Composites. , 2018, , 1-12.		0
110	Porous Silicon Optical Biosensors. , 2018, , 1263-1273.		0