

Mustafa Kemal Sezgin

List of Publications by Year in descending order

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110
papers

3,961
citations

147726

31
h-index

133188

59
g-index

111
all docs

111
docs citations

111
times ranked

4297
citing authors

#	ARTICLE	IF	CITATIONS
1	Lateral flow assays: Principles, designs and labels. <i>TrAC - Trends in Analytical Chemistry</i> , 2016, 82, 286-306.	5.8	428
2	Applications of commercial biosensors in clinical, food, environmental, and biothreat/biowarfare analyses. <i>Analytical Biochemistry</i> , 2015, 478, 107-120.	1.1	326
3	A review on impedimetric biosensors. <i>Artificial Cells, Nanomedicine and Biotechnology</i> , 2016, 44, 248-262.	1.9	202
4	Applications of graphene in electrochemical sensing and biosensing. <i>TrAC - Trends in Analytical Chemistry</i> , 2016, 76, 1-14.	5.8	189
5	Applications of electrochemical immunosensors for early clinical diagnostics. <i>Talanta</i> , 2015, 132, 162-174.	2.9	168
6	Electrochemical biosensors for hormone analyses. <i>Biosensors and Bioelectronics</i> , 2015, 68, 62-71.	5.3	126
7	Indium tin oxide (ITO): A promising material in biosensing technology. <i>TrAC - Trends in Analytical Chemistry</i> , 2017, 97, 309-315.	5.8	121
8	Development of an impedimetric aflatoxin M1 biosensor based on a DNA probe and gold nanoparticles. <i>Biosensors and Bioelectronics</i> , 2011, 26, 3806-3811.	5.3	111
9	Poly(amidoamine) (PAMAM): An emerging material for electrochemical bio(sensing) applications. <i>Talanta</i> , 2016, 148, 427-438.	2.9	98
10	A highly sensitive immunosensor based on ITO thin films covered by a new semi-conductive conjugated polymer for the determination of TNF α in human saliva and serum samples. <i>Biosensors and Bioelectronics</i> , 2017, 97, 169-176.	5.3	95
11	A highly selective electrochemical immunosensor based on conductive carbon black and star PGMA polymer composite material for IL-8 biomarker detection in human serum and saliva. <i>Biosensors and Bioelectronics</i> , 2018, 117, 720-728.	5.3	82
12	Electrochemical immunosensor based on chitosan/conductive carbon black composite modified disposable ITO electrode: An analytical platform for p53 detection. <i>Biosensors and Bioelectronics</i> , 2018, 121, 80-89.	5.3	76
13	A disposable immunosensor using ITO based electrode modified by a star-shaped polymer for analysis of tumor suppressor protein p53 in human serum. <i>Biosensors and Bioelectronics</i> , 2018, 107, 1-9.	5.3	62
14	Selective and ultrasensitive electrochemical immunosensing of NSE cancer biomarker in human serum using epoxy-substituted poly(pyrrole) polymer modified disposable ITO electrode. <i>Sensors and Actuators B: Chemical</i> , 2020, 306, 127613.	4.0	61
15	AuNPs modified, disposable, ITO based biosensor: Early diagnosis of heat shock protein 70. <i>Biosensors and Bioelectronics</i> , 2016, 84, 22-29.	5.3	59
16	Cerebrospinal fluid levels of alpha-synuclein measured using a poly-glutamic acid-modified gold nanoparticle-doped disposable neuro-biosensor system. <i>Analyst</i> , 2019, 144, 611-621.	1.7	58
17	Highly sensitive electrochemical immunosensor based on polythiophene polymer with densely populated carboxyl groups as immobilization matrix for detection of interleukin 1 β in human serum and saliva. <i>Sensors and Actuators B: Chemical</i> , 2018, 270, 18-27.	4.0	53
18	A new impedimetric biosensor utilizing VEGF receptor-1 (Flt-1): Early diagnosis of vascular endothelial growth factor in breast cancer. <i>Biosensors and Bioelectronics</i> , 2011, 26, 4032-4039.	5.3	51

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19	Electrochemical biosensor based on self-assembled monolayers modified with gold nanoparticles for detection of HER-3. <i>Analytica Chimica Acta</i> , 2014, 814, 31-38.	2.6	51
20	Direct determination of sulfite in food samples by a biosensor based on plant tissue homogenate. <i>Talanta</i> , 2005, 65, 998-1002.	2.9	48
21	A novel electrochemical immunosensor based on acetylene black/epoxy-substituted-polypyrrole polymer composite for the highly sensitive and selective detection of interleukin 6. <i>Talanta</i> , 2021, 222, 121596.	2.9	48
22	A sensitive and disposable electrochemical immunosensor for detection of SOX2, a biomarker of cancer. <i>Talanta</i> , 2017, 172, 162-170.	2.9	47
23	Electrochemical immunosensor for CDH22 biomarker based on benzaldehyde substituted poly(phosphazene) modified disposable ITO electrode: A new fabrication strategy for biosensors. <i>Biosensors and Bioelectronics</i> , 2019, 126, 230-239.	5.3	47
24	Ultrasensitive electrochemical detection of cancer associated biomarker HER3 based on anti-HER3 biosensor. <i>Talanta</i> , 2014, 120, 355-361.	2.9	43
25	Introducing a new method for evaluation of the interaction between an antigen and an antibody: Single frequency impedance analysis for biosensing systems. <i>Talanta</i> , 2014, 125, 7-13.	2.9	43
26	A novel impedimetric disposable immunosensor for rapid detection of a potential cancer biomarker. <i>International Journal of Biological Macromolecules</i> , 2014, 66, 273-280.	3.6	43
27	Fabrication of a highly sensitive disposable immunosensor based on indium tin oxide substrates for cancer biomarker detection. <i>Analytical Biochemistry</i> , 2014, 446, 9-18.	1.1	40
28	An impedimetric immunosensor for highly sensitive detection of IL-8 in human serum and saliva samples: A new surface modification method by 6-phosphonohexanoic acid for biosensing applications. <i>Analytical Biochemistry</i> , 2018, 554, 44-52.	1.1	39
29	Highly selective and sensitive sandwich immunosensor platform modified with MUA-capped GNPs for detection of spike Receptor Binding Domain protein: A precious marker of COVID 19 infection. <i>Sensors and Actuators B: Chemical</i> , 2021, 345, 130355.	4.0	36
30	Evaluation of a new biosensor-based mushroom (<i>Agaricus bisporus</i>) tissue homogenate: investigation of certain phenolic compounds and some inhibitor effects. <i>Biosensors and Bioelectronics</i> , 2004, 20, 592-597.	5.3	34
31	A biosensor based on catalase for determination of highly toxic chemical azide in fruit juices. <i>Biosensors and Bioelectronics</i> , 2005, 21, 684-688.	5.3	34
32	A disposable and ultrasensitive ITO based biosensor modified by 6-phosphonohexanoic acid for electrochemical sensing of IL-1 β in human serum and saliva. <i>Analytica Chimica Acta</i> , 2018, 1039, 41-50.	2.6	32
33	Advances in electrochemical immunosensors. <i>Advances in Clinical Chemistry</i> , 2019, 92, 1-57.	1.8	31
34	Advances in immunosensor technology. <i>Advances in Clinical Chemistry</i> , 2021, 102, 1-62.	1.8	31
35	An amperometric inhibitor biosensor for the determination of reduced glutathione (GSH) without any derivatization in some plants. <i>Biosensors and Bioelectronics</i> , 2004, 19, 835-841.	5.3	29
36	A new immobilization procedure for development of an electrochemical immunosensor for parathyroid hormone detection based on gold electrodes modified with 6-mercaptohexanol and silane. <i>Talanta</i> , 2015, 144, 210-218.	2.9	29

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37	A Highly Selective Poly(thiophene)-graft-Poly(methacrylamide) Polymer Modified ITO Electrode for Neuron Specific Enolase Detection in Human Serum. <i>Macromolecular Bioscience</i> , 2019, 19, e1900109.	2.1	29
38	Fabrication of electrochemical immunosensor based on acid-substituted poly(pyrrole) polymer modified disposable ITO electrode for sensitive detection of CCR4 cancer biomarker in human serum. <i>Talanta</i> , 2021, 222, 121487.	2.9	29
39	A novel amperometric biosensor based on spinach (<i>Spinacia oleracea</i>) tissue homogenate for urinary oxalate determination. <i>Talanta</i> , 2003, 59, 545-551.	2.9	28
40	Graphene oxide based electrochemical label free immunosensor for rapid and highly sensitive determination of tumor marker HSP70. <i>Talanta</i> , 2016, 160, 367-374.	2.9	28
41	A novel immunosensor based on fullerene C60 for electrochemical analysis of heat shock protein 70. <i>Journal of Electroanalytical Chemistry</i> , 2016, 783, 201-207.	1.9	28
42	A novel ultrasensitive immunosensor based on disposable graphite paper electrodes for troponin T detection in cardiovascular disease. <i>Talanta</i> , 2020, 213, 120779.	2.9	28
43	Detection of parathyroid hormone using an electrochemical impedance biosensor based on PAMAM dendrimers. <i>Biotechnology Progress</i> , 2015, 31, 815-822.	1.3	27
44	The development of an ultra-sensitive electrochemical immunosensor using a PPy-NHS functionalized disposable ITO sheet for the detection of interleukin 6 in real human serums. <i>New Journal of Chemistry</i> , 2020, 44, 14228-14238.	1.4	27
45	Analysis of Tau-441 protein in clinical samples using rGO/AuNP nanocomposite-supported disposable impedimetric neuro-biosensing platform: Towards Alzheimer's disease detection. <i>Talanta</i> , 2020, 219, 121257.	2.9	27
46	An impedimetric vascular endothelial growth factor biosensor-based PAMAM/cysteamine-modified gold electrode for monitoring of tumor growth. <i>Analytical Biochemistry</i> , 2012, 423, 277-285.	1.1	26
47	Glucose oxidase- β -galactosidase hybrid biosensor based on glassy carbon electrode modified with mercury for lactose determination. <i>Analytica Chimica Acta</i> , 2005, 551, 51-56.	2.6	23
48	A novel silanization agent based single used biosensing system: Detection of C-reactive protein as a potential Alzheimer's disease blood biomarker. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2018, 154, 227-235.	1.4	23
49	New Impedimetric Sandwich Immunosensor for Ultrasensitive and Highly Specific Detection of Spike Receptor Binding Domain Protein of SARS-CoV-2. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 3874-3885.	2.6	22
50	A label-free electrochemical biosensor for direct detection of RACK 1 by using disposable, low-cost and reproducible ITO based electrode. <i>Analytica Chimica Acta</i> , 2018, 1024, 65-72.	2.6	21
51	Ultrasensitive determination of cadherin-like protein 22 with a label-free electrochemical immunosensor using brush type poly(thiophene-g-glycidylmethacrylate) modified disposable ITO electrode. <i>Talanta</i> , 2019, 200, 387-397.	2.9	21
52	Biosensing strategies for diagnosis of prostate specific antigen. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2022, 209, 114535.	1.4	21
53	A sensitive and disposable indium tin oxide based electrochemical immunosensor for label-free detection of MAGE-1. <i>Talanta</i> , 2017, 169, 163-169.	2.9	19
54	Determination of C-reactive protein by PAMAM decorated ITO based disposable biosensing system: A new immunosensor design from an old molecule. <i>Talanta</i> , 2018, 186, 162-168.	2.9	19

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55	A novel electrochemical immunosensor based on disposable ITO-PET electrodes for sensitive detection of PAK 2 antigen. <i>Journal of Electroanalytical Chemistry</i> , 2019, 848, 113304.	1.9	19
56	A comparative study of short chain and long chain mercapto acids used in biosensor fabrication: A VEGF-R1-based immunosensor as a model system. <i>Artificial Cells, Nanomedicine and Biotechnology</i> , 2016, 44, 462-470.	1.9	18
57	A novel electrochemical immunosensor based on ITO modified by carboxyl-ended silane agent for ultrasensitive detection of MAGE-1 in human serum. <i>Analytical Biochemistry</i> , 2017, 537, 84-92.	1.1	18
58	Construction of succinimide group substituted polythiophene polymer functionalized sensing platform for ultrasensitive detection of KLK 4 cancer biomarker. <i>Sensors and Actuators B: Chemical</i> , 2020, 325, 128788.	4.0	18
59	An impedimetric biosensor system based on disposable graphite paper electrodes: Detection of ST2 as a potential biomarker for cardiovascular disease in human serum. <i>Analytica Chimica Acta</i> , 2021, 1144, 43-52.	2.6	17
60	Biosensors in Drug Discovery and Drug Analysis. <i>Current Analytical Chemistry</i> , 2019, 15, 467-484.	0.6	17
61	An ITO Based Disposable Biosensor for Ultrasensitive Analysis of Retinol Binding Protein. <i>Electroanalysis</i> , 2014, 26, 328-339.	1.5	15
62	Ultrasensitive Impedimetric Biosensor Fabricated by a New Immobilisation Technique for Parathyroid Hormone. <i>Applied Biochemistry and Biotechnology</i> , 2015, 176, 1251-1262.	1.4	14
63	A novel label free immunosensor based on single-use ITO-PET electrodes for detection MAGE1 protein. <i>Journal of Electroanalytical Chemistry</i> , 2017, 792, 31-38.	1.9	14
64	Highly sensitive and cost-effective ITO-based immunosensor system modified by 11-CUTMS: Analysis of SOX2 protein in real human serum. <i>International Journal of Biological Macromolecules</i> , 2019, 130, 245-252.	3.6	14
65	A novel and disposable GP- based impedimetric biosensor using electropolymerization process with PGA for highly sensitive determination of leptin: Early diagnosis of childhood obesity. <i>Talanta</i> , 2021, 225, 121985.	2.9	14
66	Determination of calreticulin using Fe ₃ O ₄ @AuNPs core-shell functionalized with PT(COOH) ₂ polymer modified electrode: A new platform for the impedimetric biosensing of cancer biomarkers. <i>Sensors and Actuators B: Chemical</i> , 2022, 367, 132099.	4.0	14
67	An epoxysilane modified indium tin oxide electrode for the determination of PAK 2: Application in human serum samples. <i>Analytica Chimica Acta</i> , 2019, 1062, 68-77.	2.6	13
68	A nano-composite based regenerative neuro biosensor sensitive to Parkinsonism-associated protein DJ-1/Park7 in cerebrospinal fluid and saliva. <i>Bioelectrochemistry</i> , 2021, 138, 107734.	2.4	13
69	Biosensor approaches on the diagnosis of neurodegenerative diseases: Sensing the past to the future. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2022, 209, 114479.	1.4	13
70	β-Galactosidase monitoring by a biosensor based on Clark electrode: Its optimization, characterization and application. <i>Biosensors and Bioelectronics</i> , 2008, 23, 1799-1804.	5.3	12
71	Biosensor technologies for analyses of food contaminants. , 2017, , 289-337.		11
72	A comparison between LP(GMA) and CLP(GMA) polymer composites as an immobilization matrix for biosensing applications: A model immunosensor for IL 1β. <i>Analytica Chimica Acta</i> , 2019, 1077, 129-139.	2.6	11

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73	A New Approach to Synthesis of Highly Dispersed Gold Nanoparticles via Glucose Oxidaseâ€Immobilized Hydrogel and Usage in The Reduction of 4â€Nitrophenol. ChemistrySelect, 2020, 5, 9143-9152.	0.7	11
74	A novel biosensing system based on ITO-single use electrode for highly sensitive analysis of VEGF. International Journal of Environmental Analytical Chemistry, 2020, 100, 432-450.	1.8	11
75	A high sensitive and cost-effective disposable biosensor for adiponectin determination in real human serum samples. Sensors and Actuators B: Chemical, 2021, 328, 129051.	4.0	11
76	Glutathione (GSH) Determination by a Very Simple Electrochemical Method. International Journal of Peptide Research and Therapeutics, 2011, 17, 87-92.	0.9	10
77	Development of a Biosensor for Controlling of Thiourea in Fruit Juices. Food and Bioprocess Technology, 2010, 3, 128-134.	2.6	9
78	Biosensors and the evaluation of food contaminant biosensors in terms of their performance criteria. International Journal of Environmental Analytical Chemistry, 2020, 100, 602-622.	1.8	8
79	Label-free and reagent-less electrochemical detection of nucleocapsid protein of SARS-CoV-2: an ultrasensitive and disposable biosensor. New Journal of Chemistry, 2022, 46, 9172-9183.	1.4	8
80	H₂O₂ Determination by a Biosensor Based on Hemoglobin. Preparative Biochemistry and Biotechnology, 2008, 39, 1-10.	1.0	7
81	A Biosensor Based on Zucchini (Cucurbita PepoL.) Homogenate as a Biorecognition Layer for Ascorbic Acid Determination. Artificial Cells, Blood Substitutes, and Biotechnology, 2010, 38, 215-221.	0.9	7
82	Quantification of Trypsin Activity by a New Biosensing System Based on the Enzymatic Degradation and the Destructive Nature of Trypsin. International Journal of Peptide Research and Therapeutics, 2017, 23, 313-322.	0.9	7
83	Introduction to commercial biosensors. , 2020, , 1-28.		7
84	Ultrasensitive detection of interleukin 1Î± using 3-phosphonopropionic acid modified FTO surface as an effective platform for disposable biosensor fabrication. Bioelectrochemistry, 2021, 138, 107698.	2.4	7
85	A Novel Biosensing System Using Biological Receptor for Analysis of Vascular Endothelial Growth Factor. International Journal of Peptide Research and Therapeutics, 2014, 20, 221-230.	0.9	6
86	A label-free immunosensor for sensitive detection of RACK 1 cancer biomarker based on conjugated polymer modified ITO electrode. Journal of Pharmaceutical and Biomedical Analysis, 2020, 190, 113517.	1.4	6
87	Detection of Kallikrein-Related Peptidase 4 with a Label-free Electrochemical Impedance Biosensor Based on a Zinc(II) Phthalocyanine Tetracarboxylic Acid-Functionalized Disposable Indium Tin Oxide Electrode. ACS Biomaterials Science and Engineering, 2021, 7, 1192-1201.	2.6	6
88	Construction and Comparison of Trametes versicolor Laccase Biosensors Capable of Detecting Xenobiotics. Artificial Cells, Blood Substitutes, and Biotechnology, 2010, 38, 192-199.	0.9	5
89	ELECTROCHEMICAL CYSTEINE DETERMINATION IN SERUM SAMPLES BY Hg THIN FILM SENSOR. Preparative Biochemistry and Biotechnology, 2010, 41, 30-39.	1.0	5
90	Fabrication of Electrochemical Immunosensor for Detection of Interleukin 8 Biomarker via Layer-by-Layer Self-Assembly Process on Cost-Effective Fluorine Tin Oxide Electrode. Electroanalysis, 2021, 33, 1596-1605.	1.5	5

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91	Ultrasensitive and Selective Impedimetric Determination of Prostate Specific Membrane Antigen Based on Diâ€Succinimide Functionalized Polythiophene Covered Costâ€Effective Indium Tin Oxide. <i>Macromolecular Bioscience</i> , 2021, 21, e2100173.	2.1	5
92	Ultra-sensitive detection of parathyroid hormone in human serum: a cheap and practical biosensing platform modified by an epoxy ended-silane agent. <i>International Journal of Environmental Analytical Chemistry</i> , 2020, 100, 393-407.	1.8	4
93	A High Sensitive, Reproducible and Disposable Immunosensor for Analysis of SOX2. <i>Electroanalysis</i> , 2020, 32, 1065-1074.	1.5	4
94	Electrochemical Immunosensor for Detection of CCR4 Cancer Biomarker in Human Serum: An Alternative Strategy for Modification of Disposable ITO Electrode. <i>Macromolecular Bioscience</i> , 2021, 21, e2000267.	2.1	4
95	Highly Sensitive and Single-Use Biosensing System Based on a GP Electrode for Analysis of Adiponectin, an Obesity Biomarker. <i>ACS Biomaterials Science and Engineering</i> , 2021, 7, 3658-3668.	2.6	4
96	A direct and simple immobilization route for immunosensors by CNBr activation for covalent attachment of anti-leptin: obesity diagnosis point of view. <i>3 Biotech</i> , 2022, 12, 33.	1.1	4
97	Sulfite Determination by an Inhibitor Biosensor-based Mushroom (<i>Agaricus Bisporus</i>) Tissue Homogenate. <i>Artificial Cells, Blood Substitutes, and Biotechnology</i> , 2012, 40, 38-43.	0.9	3
98	A new methodology for the determination of enzyme activity based on carbon nanotubes and glucose oxidase. <i>Journal of Pharmaceutical and Biomedical Analysis</i> , 2015, 115, 254-259.	1.4	3
99	Quantitative Analysis of a Promising Cancer Biomarker, Calretinin, by a Biosensing System Based on Simple and Effective Immobilization Process. <i>Electroanalysis</i> , 2016, 28, 334-342.	1.5	3
100	An ultrasensitive electrochemical immunosensor platform based on disposable ITO electrode modified by 3-CPTMS for early detection of parathyroid hormone. <i>Turkish Journal of Chemistry</i> , 2019, 43, 1697-1710.	0.5	3
101	A Label-free Electrochemical Immunosensor for Highly Sensitive Detection of TNF Î±, Based on Star Polymer-modified disposable ITO Electrode. <i>Current Pharmaceutical Analysis</i> , 2021, 17, 450-459.	0.3	3
102	Development of a biosensor platform based on ITO sheets modified with 3-glycidoxypropyltrimethoxysilane for early detection of TRAP1. <i>Turkish Journal of Chemistry</i> , 2020, 44, 461-471.	0.5	2
103	Bioprocess monitoring by biosensor-based technologies. , 2020, , 259-285.		1
104	Glucose Monitoring by a Biosensor Based on Mercury Thin Film Electrodes. <i>Analytical Letters</i> , 2008, 41, 1074-1082.	1.0	0
105	A BIOSENSOR UTILIZING QUINCE (<i>CYDONIA VULGARIS</i>) TISSUE HOMOGENATE FOR DOPAMINE DETERMINATION IN PHARMACEUTICAL PREPARATIONS. <i>Preparative Biochemistry and Biotechnology</i> , 2010, 40, 129-138.	1.0	0
106	A Biosensor for the Determination of Î²-galactosidase Activity: A Different Viewpoint on Biosensors. <i>Artificial Cells, Blood Substitutes, and Biotechnology</i> , 2011, 39, 281-288.	0.9	0
107	Î²-galactosidase Determination by an Electrochemical Biosensor Mediated with Ferrocene. <i>Artificial Cells, Blood Substitutes, and Biotechnology</i> , 2011, 39, 267-273.	0.9	0
108	Paper-based devices. , 2020, , 107-166.		0

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109	Preface for the special issue of 4th International congress on biosensors. International Journal of Environmental Analytical Chemistry, 2020, 100, 361-362.	1.8	0
110	Immunosensors Based on the Technology of Molecular Imprinted Polymers. , 2021, , 117-161.		0