Ye Chen-Izu

List of Publications by Year
in descending order

111 papers	2,681 citations	185998 28 h-index	189595 50 g-index
112 all docs	112 docs citations	112 times ranked	3423 citing authors

#	Article	IF	Citations
1	Three-Dimensional Distribution of Ryanodine Receptor Clusters in Cardiac Myocytes. Biophysical Journal, 2006, 91, 1-13.	0.2	188
2	Na⁺/Ca²⁺ exchange and Na⁺/K⁺â€ATPase in the heart. Journal of Physiology, 2015, 593, 1361-1382.	1.3	160
3	Gi Protein-mediated Functional Compartmentalization of Cardiac Î²2-Adrenergic Signaling. Journal of Biological Chemistry, 1999, 274, 22048-22052.	1.6	150
4	Gi-Dependent Localization of Î²2-Adrenergic Receptor Signaling to L-Type Ca2+ Channels. Biophysical Journal, 2000, 79, 2547-2556.	0.2	150
5	Mechanochemotransduction During Cardiomyocyte Contraction Is Mediated by Localized Nitric Oxide Signaling. Science Signaling, 2014, 7, ra27.	1.6	128
6	Role of the Transverseâ€Axial Tubule System in Generating Calcium Sparks and Calcium Transients in Rat Atrial Myocytes. Journal of Physiology, 2003, 547, 441-451.	1.3	113
7	Oxidation of ryanodine receptor (RyR) and calmodulin enhance Ca release and pathologically alter, RyR structure and calmodulin affinity. Journal of Molecular and Cellular Cardiology, 2015, 85, 240-248.	0.9	91
8	Interplay of Ryanodine Receptor Distribution and Calcium Dynamics. Biophysical Journal, 2006, 91, 95-112.	0.2	88
9	Dynamics of the late Na+ current during cardiac action potential and its contribution to afterdepolarizations. Journal of Molecular and Cellular Cardiology, 2013, 64, 59-68.	0.9	86
10	KCNJ15/Kir4.2 couples with polyamines to sense weak extracellular electric fields in galvanotaxis. Nature Communications, 2015, 6, 8532.	5.8	83
11	Transformation of adult rat cardiac myocytes in primary culture. Experimental Physiology, 2008, 93, 370-382.	0.9	82
12	Left ventricular dysfunction and associated cellular injury in rats exposed to chronic intermittent hypoxia. Journal of Applied Physiology, 2008, 104, 218-223.	1.2	82
13	CaMKII-dependent phosphorylation of RyR2 promotes targetable pathological RyR2 conformational shift. Journal of Molecular and Cellular Cardiology, 2016, 98, 62-72.	0.9	80
14	Potassium channels in the heart: structure, function and regulation. Journal of Physiology, 2017, 595, 2209-2228.	1.3	79
15	Potassium currents in the heart: functional roles in repolarization, arrhythmia and therapeutics. Journal of Physiology, 2017, 595, 2229-2252.	1.3	76
16	Complex electrophysiological remodeling in postinfarction ischemic heart failure. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, E3036-E3044.	3.3	72
17	Na⁺ channel function, regulation, structure, trafficking and sequestration. Journal of Physiology, 2015, 593, 1347-1360.	1.3	59
18	Sequential dissection of multiple ionic currents in single cardiac myocytes under action potential-clamp. Journal of Molecular and Cellular Cardiology, 2011, 50, 578-581.	0.9	57

#	ARTICLE	IF	CITATIONS
19	Î²-adrenergic regulation of late Na+ current during cardiac action potential is mediated by both PKA and CaMKII. Journal of Molecular and Cellular Cardiology, 2018, 123, 168-179.	0.9	55
20	A New Approach to the Detection and Statistical Classification of Ca2+ Sparks. Biophysical Journal, 2007, 92, 4458-4465.	0.2	47
21	Deranged sodium to sudden death. Journal of Physiology, 2015, 593, 1331-1345.	1.3	46
22	Phosphorylation of RyR2 and shortening of RyR2 cluster spacing in spontaneously hypertensive rat with heart failure. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 293, H2409-H2417.	1.5	45
23	Beta-adrenergic stimulation reverses the I Krâ€“I Ks dominant pattern during cardiac action potential. Pflugers Archiv European Journal of Physiology, 2014, 466, 2067-2076.	1.3	44
24	Hypertension-induced remodeling of cardiac excitation-contraction coupling in ventricular myocytes occurs prior to hypertrophy development. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 293, H3301-H3310.	1.5	42
25	Profile of L-type Ca2+ current and Na+/Ca2+ exchange current during cardiac action potential in ventricular myocytes. Heart Rhythm, 2012, 9, 134-142.	0.3	39
26	Opposing gates model for voltage gating of gap junction channels. American Journal of Physiology - Cell Physiology, 2001, 281, C1604-C1613.	2.1	38
27	Altered Repolarization Reserve in Failing Rabbit Ventricular Myocytes. Circulation: Arrhythmia and Electrophysiology, 2018, 11, e005852.	2.1	30
28	Coupling of SK channels, L-type Ca2+ channels, and ryanodine receptors in cardiomyocytes. Scientific Reports, 2018, 8, 4670.	1.6	30
29	Mechanoâ€electric and mechanoâ€chemoâ€transduction in cardiomyocytes. Journal of Physiology, 2020, 598, 1285-1305.	1.3	30
30	Ca2+ waves in the heart. Journal of Molecular and Cellular Cardiology, 2013, 58, 118-124.	0.9	29
31	Enhanced Depolarization Drive in Failing Rabbit Ventricular Myocytes. Circulation: Arrhythmia and Electrophysiology, 2019, 12, e007061.	2.1	29
32	KN-93 inhibits IKr in mammalian cardiomyocytes. Journal of Molecular and Cellular Cardiology, 2015, 89, 173-176.	0.9	28
33	A computational modelling approach combined with cellular electrophysiology data provides insights into the therapeutic benefit of targeting the late Na⁺ current. Journal of Physiology, 2015, 593, 1429-1442.	1.3	22
34	Mechanoâ€chemoâ€transduction in cardiac myocytes. Journal of Physiology, 2017, 595, 3949-3958.	1.3	22
35	Mechanical Analysis of Single Myocyte Contraction in a 3-D Elastic Matrix. PLoS ONE, 2013, 8, e75492.	1.1	22
36	Multimodal SHG-2PF Imaging of Microdomain Ca ²⁺ -Contraction Coupling in Live Cardiac Myocytes. Circulation Research, 2016, 118, e19-28.	2.0	19

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37	Ca2+-activated Clâˆ’ current is antiarrhythmic by reducing both spatial and temporal heterogeneity of cardiac repolarization. Journal of Molecular and Cellular Cardiology, 2017, 109, 27-37.	0.9	18
38	The force-frequency relationship: insights from mathematical modeling. American Journal of Physiology - Advances in Physiology Education, 2013, 37, 28-34.	0.8	17
39	Action Potential Shortening and Impairment of Cardiac Function by Ablation of <i>Slc26a6</i>. Circulation: Arrhythmia and Electrophysiology, 2017, 10, .	2.1	17
40	FRET-Based Trilateration of Probes Bound within Functional Ryanodine Receptors. Biophysical Journal, 2014, 107, 2037-2048.	0.2	16
41	Balance Between Rapid Delayed Rectifier K ⁺ Current and Late Na ⁺ Current on Ventricular Repolarization. Circulation: Arrhythmia and Electrophysiology, 2020, 13, e008130.	2.1	16
42	Illuminating cell signaling with genetically encoded FRET biosensors in adult mouse cardiomyocytes. Journal of General Physiology, 2018, 150, 1567-1582.	0.9	15
43	Mechanoelectric coupling and arrhythmogenesis in cardiomyocytes contracting under mechanical afterload in a 3D viscoelastic hydrogel. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, e2108484118.	3.3	14
44	Electrophysiological Determination of Submembrane Na + Concentration in Cardiac Myocytes. Biophysical Journal, 2016, 111, 1304-1315.	0.2	12
45	Cardiac Calmodulin Kinase: A Potential Target for Drug Design. Current Medicinal Chemistry, 2011, 18, 3707-3713.	1.2	10
46	Sodium and calcium regulation in cardiac myocytes: from molecules to heart failure and arrhythmia. Journal of Physiology, 2015, 593, 1327-1329.	1.3	10
47	In Vivo Cannulation Methods for Cardiomyocytes Isolation from Heart Disease Models. PLoS ONE, 2016, 11, e0160605.	1.1	10
48	Eavesdropping on the Social Lives of Ca2+ Sparks. Biophysical Journal, 2007, 93, 3408-3420.	0.2	9
49	Mechanical Load Regulates Excitation-Ca ²⁺ Signaling-Contraction in Cardiomyocyte. Circulation Research, 2021, 128, 772-774.	2.0	9
50	ICa(TTX) Channels Are Distinct from Those Generating the Classical Cardiac Na+ Current. Biophysical Journal, 2001, 81, 2647-2659.	0.2	8
51	Digoxin and Adenosine Triphosphate Enhance the Functional Properties of Tissue-Engineered Cartilage. Tissue Engineering - Part A, 2015, 21, 884-894.	1.6	8
52	An Emerging Antiarrhythmic Target: Late Sodium Current. Current Pharmaceutical Design, 2014, 21, 1073-1090.	0.9	7
53	Altered K+ current profiles underlie cardiac action potential shortening in hyperkalemia and Î²-adrenergic stimulation. Canadian Journal of Physiology and Pharmacology, 2019, 97, 773-780.	0.7	6
54	A viscoelastic Eshelby inclusion model and analysis of the Cell-in-Gel system. International Journal of Engineering Science, 2021, 165, 103489.	2.7	6

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55	Recording of Ionic Currents Under Physiological Conditions: Action Potential-Clamp and â€˜Onion-Peelingâ€™ Techniques. , 2017, , 31-48.		6
56	From Action Potential-Clamp to "Onion-Peeling" Technique â€“ Recording of Ionic Currents Under Physiological Conditions. , 2012, , .		5
57	Beat-to-beat dynamic regulation of intracellular pH in cardiomyocytes. IScience, 2022, 25, 103624.	1.9	4
58	Multiple levels of the single L-type Ca2+ channel conductance in adult mammalian ventricular myocytes. Biochemical and Biophysical Research Communications, 2010, 391, 604-608.	1.0	3
59	Emergence of Mechano-Sensitive Contraction Autoregulation in Cardiomyocytes. Life, 2021, 11, 503.	1.1	2
60	Exploring the Coordination of Cardiac Ion Channels With Action Potential Clamp Technique. Frontiers in Physiology, 2022, 13, 864002.	1.3	2
61	Progress in the development of a unifying hypothesis on the mechanisms underlying the electrical and mechanical abnormalities of the failing heart: One step backward but two steps forward. Journal of Molecular and Cellular Cardiology, 2006, 41, 424-425.	0.9	1
62	Sarcomere Shortening Destabilizes the Ca2+ Control System in Ventricular Myocytes: Implications for Understanding Arrhythmias in Familial Hypertrophic Cardiomyopathy. Biophysical Journal, 2009, 96, 513a.	0.2	1
63	Une cellule type?. Journal of Molecular and Cellular Cardiology, 2012, 52, 921-922.	0.9	1
64	Transmural Gradient of Ito and INak Profoundly Influence Ventricular Action Potential Duration. Biophysical Journal, 2014, 106, 117a.	0.2	1
65	CaMKII and Heart Failure Promote a Pathological Ryanodine Receptor Conformation that Reduces Calmodulin Binding and Enhances SR Ca2+ Leak. Biophysical Journal, 2016, 110, 599a.	0.2	1
66	SHG-2PF Imaging of Local Ca2+ and Sub-Sarcomere Contraction in Live Cardiomyocytes. Biophysical Journal, 2016, 110, 432a.	0.2	1
67	K⁺ channels and cardiac electrophysiology. Journal of Physiology, 2017, 595, 2205-2207.	1.3	1
68	Mechanical Load Effects on Cardiomyocyte Action Potential, Cacium Transient, and Contraction Revealed by using a Novel Patch-Clamp-in-Gel Technology. Biophysical Journal, 2018, 114, 620a.	0.2	1
69	Cardiotoxicity Prediction Based on Integreted hERG Database with Molecular Convolution Model. , 2019, , .		1
70	Mechanics and energetics in cardiac arrhythmias and heart failure. Journal of Physiology, 2020, 598, 1275-1277.	1.3	1
71	CaMKII Regulates L-type Ca2+ Current during Action Potential Plateau and Repolarization _ a Direct Link to Arrhythmias. Biophysical Journal, 2009, 96, 12a.	0.2	0
72	Modeling the Dynamic Currents Recorded under Action Potential-Clamp in Cardiac Myocytes. Biophysical Journal, 2010, 98, 528a.	0.2	0

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73	Cellular Cartography. Biophysical Journal, 2010, 99, 3861-3862.	0.2	0
74	CaMKII Regulation of the Dynamic L-Type Ca2+ Current and Na+/Ca2+ Exchange Current During Action Potential in Cardiac Myocytes. Biophysical Journal, 2010, 98, 335a.	0.2	0
75	Increased Myofilament Ca2+ Sensitivity Decreases Sarcomere Length and Increases Spark-Spark Interactions. Biophysical Journal, 2011, 100, 560a.	0.2	0
76	Feed Forward Modeling. Fixing the Force Frequency Relationship. Biophysical Journal, 2012, 102, 552a-553a.	0.2	0
77	Profile of the Late Sodium Current during Cardiac Action Potential in Guinea Pig Ventricular Cardiomyocytes. Biophysical Journal, 2012, 102, 541a.	0.2	0
78	Individual Cell Electrophysiology (ICE) of Cardiac Myocytes _ Using Innovative â€˜Onion-Peelingâ€™ Technique to Study the ICE of Excitable Cells. Biophysical Journal, 2012, 102, 544a.	0.2	0
79	Cell Edge Detector: Recovering Length Information from Line-Scan Confocal Images. Biophysical Journal, 2013, 104, 293a.	0.2	0
80	In Failing Cardiomyocytes, CaM-RyR2 Dissociation Leads to Defective Domain Interaction and Channel Destabilization. Biophysical Journal, 2014, 106, 527a.	0.2	0
81	Dynamic Late Na Current During Cardiac Action Potential Revealed by a Specific and Potent Inhibitor Gs967. Biophysical Journal, 2014, 106, 328a.	0.2	0
82	Mechano-Chemotransduction in the Single Cardiac Myocyte Contracting in 3D Elastic Gel. Biophysical Journal, 2014, 106, 117a-118a.	0.2	0
83	Localized Nitric Oxide Signaling Mediates Cardiac Mechano-Chemotransduction. Biophysical Journal, 2014, 106, 566a.	0.2	0
84	Mechanical Analysis of Single Myocyte Contraction in a 3D Elastic Matrix. Biophysical Journal, 2014, 106, 565a.	0.2	0
85	Optimizing Population Variability to Maximize Benefit. PLoS ONE, 2015, 10, e0143475.	1.1	0
86	Measuring the metrics: Correlating t-tubule structure and muscle contraction in the intact heart. Journal of Molecular and Cellular Cardiology, 2015, 85, 153-154.	0.9	0
87	CaMKII-Dependent Phosphorylation of RyR2 Causes Domain Unzipping and Reduced Calmodulin Binding, But Dantrolene Reverses These Effects. Biophysical Journal, 2015, 108, 269a-270a.	0.2	0
88	Multimodal second harmonic generation and two photon fluorescence imaging of microdomain calcium contraction coupling in single cardiomyocytes. , 2016, , .		0
89	Mechanical Analysis of Single Myocyte Contraction in a 3D ViscoelasticÂGel. Biophysical Journal, 2016, 110, 101a.	0.2	0
90	Determination of the Upper Bound of Intracellular [Na+] by Electrophysiological Method: Probing the Subsarcolemmal [Na+]. Biophysical Journal, 2016, 110, 587a.	0.2	0

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91	Mechano-Chemo-transduction in Cardiomyocytes during Beat-To Beat Contraction under Mechanical Load. Biophysical Journal, 2016, 110, 185a.	0.2	0
92	Spatial and Functional Interactions between SK Channels and L-Type Calcium Channels in Cardiomyocytes. Biophysical Journal, 2016, 110, 122a.	0.2	0
93	CaMKII Inhibitor KN-93 Directly Blocks IKr in Cardiac Myocytes. Biophysical Journal, 2016, 110, 273a.	0.2	0
94	Mechano-Chemo-Transduction in Rabbit Cardiomyocytes Mediated by no Signaling. Biophysical Journal, 2016, 110, 600a.	0.2	0
95	CA2+ Tides in Cardiomyocytes Under Mechanical Loading. Biophysical Journal, 2016, 110, 100a.	0.2	0
96	Ionic Current Changes during Action Potentials in Porcine Post-MI Heart Failure Model. Biophysical Journal, 2017, 112, 402a.	0.2	0
97	Mechano-chemo-transduction is attenuated in a rabbit model of heart failure. Journal of Molecular and Cellular Cardiology, 2017, 112, 147.	0.9	0
98	Identification of cardiomyocytes' characteristics responsible for dynamical changes in calcium profile in response to mechano-chemo transduction. Journal of Molecular and Cellular Cardiology, 2017, 112, 168.	0.9	0
99	Avoiding phantasms. Cardiovascular Research, 2017, 113, 1703-1704.	1.8	0
100	Identification of Cardiomyocytes' Inner Workings Responsible for Dynamical Changes in Calcium Profile in Response to Mechanical Load. Biophysical Journal, 2018, 114, 466a-467a.	0.2	0
101	Mechanotransduction via No Signaling Auto-Regulates Cardiomyocyte Contractility. Biophysical Journal, 2018, 114, 620a.	0.2	0
102	A Mathematical Model of a Pig Ventricular Myocyte. Biophysical Journal, 2018, 114, 471a.	0.2	0
103	Surface Mechanosensors and the Fundamental Conundrum of Homeometric Regulation. Biophysical Journal, 2018, 114, 41a.	0.2	0
104	Functional Connectome of the Mechanically Loaded Cardiomyocyte I: Identifying Involved Subsystems. Biophysical Journal, 2019, 116, 237a.	0.2	0
105	Functional Connectome of the Mechanically Loaded Cardiomyocyte II: Coordinated Changes of Subsystems. Biophysical Journal, 2019, 116, 97a.	0.2	0
106	Mechanical Load Effects on Cardiac Action Potential and Arrhythmogenic Ca2+Activitiesrevealed by a Novel Patch-Clamp-In-Gel Technology. Biophysical Journal, 2019, 116, 97a.	0.2	0
107	Mechanical Load on Cardiomyocyte Activates Mechano-Chemo-Transduction to Autoregulate Ca2+ Signaling and Contractility. Biophysical Journal, 2020, 118, 409a.	0.2	0
108	Diminished Î²-Adrenergic Response in Protein Kinase D Knock-Out Cardiomyocytes. Biophysical Journal, 2020, 118, 101a.	0.2	0

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109	Contractility Autoregulation in Cardiomyocytes Emerges from Mechanosensor Geometry and Mechano-Chemo-Transduction. Biophysical Journal, 2020, 118, 251a.	0.2	0
110	Viscoelastic Eshelby Analysis of Cardiomyocyte Contraction in the Cell-in-Gel System. , 2018, , .		0
111	Modeling cardiomyocyte mechanics and autoregulation of contractility by mechano-chemo-transduction feedback. IScience, 2022, 25, 104667.	1.9	0