Stephan Rohr

List of Publications by Year
in descending order

60 papers	4,932 citations	109321 35 h-index	168389 53 g-index
61 all docs	61 docs citations	61 times ranked	4121 citing authors

#	Article	IF	Citations
1	Advancing mechanobiology by performing whole-cell patch clamp recording on mechanosensitive cells subjected simultaneously to dynamic stretch events. IScience, 2021, 24, 102041.	4.1	4
2	Enabling comprehensive optogenetic studies of mouse hearts by simultaneous opto-electrical panoramic mapping and stimulation. Nature Communications, 2021, 12, 5804.	12.8	6
3	Nanovolcano microelectrode arrays: toward long-term on-demand registration of transmembrane action potentials by controlled electroporation. Microsystems and Nanoengineering, 2020, 6, 67.	7.0	16
4	The Role of Membrane Capacitance in Cardiac Impulse Conduction: An Optogenetic Study With Non-excitable Cells Coupled to Cardiomyocytes. Frontiers in Physiology, 2020, 11, 194.	2.8	11
5	Intracellular Recording of Cardiomyocyte Action Potentials with Nanopatterned Volcano-Shaped Microelectrode Arrays. Nano Letters, 2019, 19, 6173-6181.	9.1	74
6	High-speed mechano-active multielectrode array for investigating rapid stretch effects on cardiac tissue. Nature Communications, 2019, 10, 834.	12.8	45
7	A new cardiology position in Bern, Switzerland. European Heart Journal, 2018, 39, 1512-1513.	2.2	0
8	Intercellular Ultrafast Calcium Wave Velocity and Propagation of Spontaneous Electrical Activity in A7r5 Cells at Physiological Temperature. Biophysical Journal, 2018, 114, 291a.	0.5	0
9	TGF-Î² ₁ (Transforming Growth Factor-Î² ₁) Plays a Pivotal Role in Cardiac Myofibroblast Arrhythmogenicity. Circulation: Arrhythmia and Electrophysiology, 2017, 10, e004567.	4.8	73
10	Microstructure, Cell-to-Cell Coupling, and Ion Currents as Determinants of Electrical Propagation and Arrhythmogenesis. Circulation: Arrhythmia and Electrophysiology, 2017, 10, .	4.8	41
11	Myofibroblasts Electrotonically Coupled to Cardiomyocytes Alter Conduction: Insights at the Cellular Level from a Detailed In silico Tissue Structure Model. Frontiers in Physiology, 2016, 7, 496.	2.8	28
12	PITX2 Modulates Atrial Membrane Potential and the Antiarrhythmic EffectsÂofÂSodium-Channel Blockers. Journal of the American College of Cardiology, 2016, 68, 1881-1894.	2.8	90
13	Pharmacological Modulation of Hemodynamics in Adult Zebrafish In Vivo. PLoS ONE, 2016, 11, e0150948.	2.5	6
14	Optical recording of calcium currents during impulse conduction in cardiac tissue. Neurophotonics, 2015, 2, 021011.	3.3	3
15	The European Network for Translational Research in Atrial Fibrillation (EUTRAF): objectives and initial results. Europace, 2015, 17, 1457-1466.	1.7	8
16	169â€…PITX2C deficiency augments the anti-arrhythmic properties of flecainide: results in a mouse model and validation in a human atrium simulation study. Heart, 2015, 101, A96.1-A96.	2.9	0
17	Aggravation of cardiac myofibroblast arrhythmogeneicity by mechanical stress. Cardiovascular Research, 2014, 104, 489-500.	3.8	25
18	Changes of Axial Resistance following Mechanical Strain Prevail Over Stretch-Activated Currents in the Modulation of Conduction Velocity in Cardiac Cell Strands. Biophysical Journal, 2013, 104, 283a-284a.	0.5	0

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19	The natural cardioprotective particle HDL modulates connexin43 gap junction channels. Cardiovascular Research, 2012, 93, 41-49.	3.8	37
20	The European Network for Translational Research in Atrial Fibrillation. Clinical Investigation, 2012, 2, 1061-1067.	0.0	0
21	Arrhythmogenic Implications of Fibroblast-Myocyte Interactions. Circulation: Arrhythmia and Electrophysiology, 2012, 5, 442-452.	4.8	170
22	Cardiac Fibroblasts in Cell Culture Systems: Myofibroblasts All Along?. Journal of Cardiovascular Pharmacology, 2011, 57, 389-399.	1.9	66
23	A protective antiarrhythmic role of ursodeoxycholic acid in an<i>in vitro</i>rat model of the cholestatic fetal heart. Hepatology, 2011, 54, 1282-1292.	7.3	73
24	Abolishing Myofibroblast Arrhythmogeneicity by Pharmacological Ablation of Î±-Smooth Muscle Actin Containing Stress Fibers. Circulation Research, 2011, 109, 1120-1131.	4.5	56
25	A highly sensitive a-Si photodetector array with integrated filter for optical detection in MEMS. Procedia Chemistry, 2009, 1, 1367-1370.	0.7	3
26	Myofibroblasts in diseased hearts: New players in cardiac arrhythmias?. Heart Rhythm, 2009, 6, 848-856.	0.7	170
27	Effects of combustion-derived ultrafine particles and manufactured nanoparticles on heart cells in vitro. Toxicology, 2008, 253, 70-78.	4.2	63
28	Adenoviral Expression of <i>I</i> _{Ks} Contributes to Wavebreak and Fibrillatory Conduction in Neonatal Rat Ventricular Cardiomyocyte Monolayers. Circulation Research, 2007, 101, 475-483.	4.5	61
29	Dynamic changes of cardiac conduction during rapid pacing. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 292, H1796-H1811.	3.2	48
30	Myofibroblasts Induce Ectopic Activity in Cardiac Tissue. Circulation Research, 2007, 101, 755-758.	4.5	260
31	Molecular Crosstalk Between Mechanical and Electrical Junctions at the Intercalated Disc. Circulation Research, 2007, 101, 637-639.	4.5	13
32	Electrotonic Modulation of Cardiac Impulse Conduction by Myofibroblasts. Circulation Research, 2006, 98, 801-810.	4.5	403
33	High-density electrode array for imaging in vitro electrophysiological activity. Biosensors and Bioelectronics, 2005, 21, 167-174.	10.1	109
34	Role of gap junctions in the propagation of the cardiac action potential. Cardiovascular Research, 2004, 62, 309-322.	3.8	389
35	Cardiac Tissue Architecture Determines Velocity and Safety of Propagation. , 2004, , 222-231.		0
36	Photolithographically defined deposition of attachment factors as a versatile method for patterning the growth of different cell types in culture. Pflugers Archiv European Journal of Physiology, 2003, 446, 125-132.	2.8	72

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37	Coupling of Cardiac Electrical Activity Over Extended Distances by Fibroblasts of Cardiac Origin. Circulation Research, 2003, 93, 421-428.	4.5	460
38	Localization of Sodium Channels in Intercalated Disks Modulates Cardiac Conduction. Circulation Research, 2002, 91, 1176-1182.	4.5	238
39	Slow conduction in cardiac tissue: Insights from optical mapping at the cellular level. Journal of Electrocardiology, 2001, 34, 57-64.	0.9	14
40	Mechanism of Ventricular Defibrillation. Circulation, 2000, 101, 2438-2445.	1.6	35
41	Nonlinear changes of transmembrane potential caused by defibrillation shocks in strands of cultured myocytes. American Journal of Physiology - Heart and Circulatory Physiology, 2000, 278, H688-H697.	3.2	43
42	Power-Law Behavior of Beat-Rate Variability in Monolayer Cultures of Neonatal Rat Ventricular Myocytes. Circulation Research, 2000, 86, 1140-1145.	4.5	56
43	Oita International Electrocardiology Symposium 2000 â€œElectrophysiology and Management of Lethal Arrhythmias in the New Millennium: From Genes to Bedsideâ€. Japanese Journal of Electrocardiology, 2000, 20, 57-63.	0.0	0
44	Optical Recording of Impulse Propagation in Designer Cultures. Trends in Cardiovascular Medicine, 1999, 9, 173-179.	4.9	29
45	Optical Recording System Based on a Fiber Optic Image Conduit: Assessment of Microscopic Activation Patterns in Cardiac Tissue. Biophysical Journal, 1998, 75, 1062-1075.	0.5	55
46	Slow Conduction in Cardiac Tissue, I. Circulation Research, 1998, 83, 781-794.	4.5	240
47	Activation of Cardiac Tissue by Extracellular Electrical Shocks. Circulation Research, 1998, 82, 375-385.	4.5	133
48	Slow Conduction in Cardiac Tissue, II. Circulation Research, 1998, 83, 795-805.	4.5	131
49	Involvement of the Calcium Inward Current in Cardiac Impulse Propagation. Biophysical Journal, 1997, 72, 754-766.	0.5	108
50	Paradoxical Improvement of Impulse Conduction in Cardiac Tissue by Partial Cellular Uncoupling. Science, 1997, 275, 841-844.	12.6	289
51	Form and Function: Impulse Propagation in Designer Cultures of Cardiomyocytes. Physiology, 1997, 12, 171-177.	3.1	5
52	Spatial Changes in Transmembrane Potential During Extracellular Electrical Shocks in Cultured Monolayers of Neonatal Rat Ventricular Myocytes. Circulation Research, 1996, 79, 676-690.	4.5	106
53	Determination of Impulse Conduction Characteristics at a icroscopic Scale in Patterned Growth Heart Cell ultures Using Multiple Site Optical Recording of Transmemhrane Voltage. Journal of Cardiovascular Electrophysiology, 1995, 6, 551-568.	1.7	20
54	Characterization of impulse propagation at the microscopic level across geometrically defined expansions of excitable tissue: multiple site optical recording of transmembrane voltage (MSORTV) in patterned growth heart cell cultures.. Journal of General Physiology, 1994, 104, 287-309.	1.9	75

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55	Multiple site optical recording of transmembrane voltage (MSORTV) in patterned growth heart cell cultures: assessing electrical behavior, with microsecond resolution, on a cellular and subcellular scale. Biophysical Journal, 1994, 67, 1301-1315.	0.5	157
56	Discontinuities in Action Potential Propagation Along Chains of Single Ventricular Myocytes in Culture: Multiple Site Optical Recording of Transmembrane Voltage (MSORTV) Suggests Propagation Delays at the Junctional Sites Between Cells. Biological Bulletin, 1992, 183, 342-343.	1.8	15
57	Optical Recording With Single Cell Resolution from a Simple Mammalian Nervous System: Electrical Activity in Ganglia from the Submucous Plexus of the Guinea-Pig Ileum. Biological Bulletin, 1992, 183, 344-346.	1.8	9
58	Patterned growth of neonatal rat heart cells in culture. Morphological and electrophysiological characterization.. Circulation Research, 1991, 68, 114-130.	4.5	201
59	A computerized device for long-term measurements of the contraction frequency of cultured rat heart cells under stable incubating conditions. Pflugers Archiv European Journal of Physiology, 1990, 416, 201-206.	2.8	13
60	Effects of arachidonic acid on the gap junctions of neonatal rat heart cells. Pflugers Archiv European Journal of Physiology, 1990, 417, 149-156.	2.8	61