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	Coupling of Cardiac Electrical Activity Over Extended Distances by Fibroblasts of Cardiac Origin. Circulation Research, 2003, 93, 421-428.	4.5	460
2	Electrotonic Modulation of Cardiac Impulse Conduction by Myofibroblasts. Circulation Research, 2006, 98, 801-810.	4.5	403
3	Role of gap junctions in the propagation of the cardiac action potential. Cardiovascular Research, 2004, 62, 309-322.	3.8	389
4	Paradoxical Improvement of Impulse Conduction in Cardiac Tissue by Partial Cellular Uncoupling. Science, 1997, 275, 841-844.	12.6	289
5	Myofibroblasts Induce Ectopic Activity in Cardiac Tissue. Circulation Research, 2007, 101, 755-758.	4.5	260
6	Slow Conduction in Cardiac Tissue, I. Circulation Research, 1998, 83, 781-794.	4.5	240
7	Localization of Sodium Channels in Intercalated Disks Modulates Cardiac Conduction. Circulation Research, 2002, 91, 1176-1182.	4.5	238
8	Patterned growth of neonatal rat heart cells in culture. Morphological and electrophysiological characterization.. Circulation Research, 1991, 68, 114-130.	4.5	201
9	Myofibroblasts in diseased hearts: New players in cardiac arrhythmias?. Heart Rhythm, 2009, 6, 848-856.	0.7	170
10	Arrhythmogenic Implications of Fibroblast-Myocyte Interactions. Circulation: Arrhythmia and Electrophysiology, 2012, 5, 442-452.	4.8	170
11	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
12	Activation of Cardiac Tissue by Extracellular Electrical Shocks. Circulation Research, 1998, 82, 375-385.	4.5	133
13	Slow Conduction in Cardiac Tissue, II. Circulation Research, 1998, 83, 795-805.	4.5	131
14	High-density electrode array for imaging in vitro electrophysiological activity. Biosensors and Bioelectronics, 2005, 21, 167-174.	10.1	109
15	Involvement of the Calcium Inward Current in Cardiac Impulse Propagation. Biophysical Journal, 1997, 72, 754-766.	0.5	108
16	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
17	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
18	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

#	ARTICLE	IF	CITATIONS
19	Intracellular Recording of Cardiomyocyte Action Potentials with Nanopatterned Volcano-Shaped Microelectrode Arrays. Nano Letters, 2019, 19, 6173-6181.	9.1	74
20	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
21	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
22	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
23	Cardiac Fibroblasts in Cell Culture Systems: Myofibroblasts All Along?. Journal of Cardiovascular Pharmacology, 2011, 57, 389-399.	1.9	66
24	Effects of combustion-derived ultrafine particles and manufactured nanoparticles on heart cells in vitro. Toxicology, 2008, 253, 70-78.	4.2	63
25	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
26	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
27	Power-Law Behavior of Beat-Rate Variability in Monolayer Cultures of Neonatal Rat Ventricular Myocytes. Circulation Research, 2000, 86, 1140-1145.	4.5	56
28	Abolishing Myofibroblast Arrhythmogeneicity by Pharmacological Ablation of Î±-Smooth Muscle Actin Containing Stress Fibers. Circulation Research, 2011, 109, 1120-1131.	4.5	56
29	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
30	Dynamic changes of cardiac conduction during rapid pacing. American Journal of Physiology - Heart and Circulatory Physiology, 2007, 292, H1796-H1811.	3.2	48
31	High-speed mechano-active multielectrode array for investigating rapid stretch effects on cardiac tissue. Nature Communications, 2019, 10, 834.	12.8	45
32	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
33	Microstructure, Cell-to-Cell Coupling, and Ion Currents as Determinants of Electrical Propagation and Arrhythmogenesis. Circulation: Arrhythmia and Electrophysiology, 2017, 10, .	4.8	41
34	The natural cardioprotective particle HDL modulates connexin43 gap junction channels. Cardiovascular Research, 2012, 93, 41-49.	3.8	37
35	Mechanism of Ventricular Defibrillation. Circulation, 2000, 101, 2438-2445.	1.6	35
36	Optical Recording of Impulse Propagation in Designer Cultures. Trends in Cardiovascular Medicine, 1999, 9, 173-179.	4.9	29

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37	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
38	Aggravation of cardiac myofibroblast arrhythmogeneicity by mechanical stress. Cardiovascular Research, 2014, 104, 489-500.	3.8	25
39	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
40	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
41	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
42	Slow conduction in cardiac tissue: Insights from optical mapping at the cellular level. Journal of Electrocardiology, 2001, 34, 57-64.	0.9	14
43	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
44	Molecular Crosstalk Between Mechanical and Electrical Junctions at the Intercalated Disc. Circulation Research, 2007, 101, 637-639.	4.5	13
45	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
46	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
47	The European Network for Translational Research in Atrial Fibrillation (EUTRAF): objectives and initial results. Europace, 2015, 17, 1457-1466.	1.7	8
48	Pharmacological Modulation of Hemodynamics in Adult Zebrafish In Vivo. PLoS ONE, 2016, 11, e0150948.	2.5	6
49	Enabling comprehensive optogenetic studies of mouse hearts by simultaneous opto-electrical panoramic mapping and stimulation. Nature Communications, 2021, 12, 5804.	12.8	6
50	Form and Function: Impulse Propagation in Designer Cultures of Cardiomyocytes. Physiology, 1997, 12, 171-177.	3.1	5
51	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
52	A highly sensitive a-Si photodetector array with integrated filter for optical detection in MEMS. Procedia Chemistry, 2009, 1, 1367-1370.	0.7	3
53	Optical recording of calcium currents during impulse conduction in cardiac tissue. Neurophotonics, 2015, 2, 021011.	3.3	3
54	The European Network for Translational Research in Atrial Fibrillation. Clinical Investigation, 2012, 2, 1061-1067.	0.0	0

#	Article	IF	Citations
55	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
56	A new cardiology position in Bern, Switzerland. European Heart Journal, 2018, 39, 1512-1513.	2.2	0
57	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
58	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
59	Cardiac Tissue Architecture Determines Velocity and Safety of Propagation. , 2004, , 222-231.		0
60	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