Charles S Chung

List of Publications by Year
in descending order

59 papers	1,269 citations	304743 22 h-index	361022 35 g-index
59 all docs	59 docs citations	59 times ranked	1530 citing authors

#	Article	IF	Citations
1	Mouse and computational models link Mlc2v dephosphorylation to altered myosin kinetics in early cardiac disease. Journal of Clinical Investigation, 2012, 122, 1209-1221.	8.2	131
2	Duration of diastole and its phases as a function of heart rate during supine bicycle exercise. American Journal of Physiology - Heart and Circulatory Physiology, 2004, 287, H2003-H2008.	3.2	129
3	Shortening of the Elastic Tandem Immunoglobulin Segment of Titin Leads to Diastolic Dysfunction. Circulation, 2013, 128, 19-28.	1.6	95
4	Mouse intact cardiac myocyte mechanics: cross-bridge and titin-based stress in unactivated cells. Journal of General Physiology, 2011, 137, 81-91.	1.9	73
5	The multifunctional Ca2+/calmodulin-dependent protein kinase II delta (CaMKIIÎ´) phosphorylates cardiac titin's spring elements. Journal of Molecular and Cellular Cardiology, 2013, 54, 90-97.	1.9	66
6	Contribution of titin and extracellular matrix to passive pressure and measurement of sarcomere length in the mouse left ventricle. Journal of Molecular and Cellular Cardiology, 2011, 50, 731-739.	1.9	65
7	Transmural heterogeneity of cellular level power output is reduced in human heart failure. Journal of Molecular and Cellular Cardiology, 2014, 72, 1-8.	1.9	49
8	Removal of immunoglobulin-like domains from titinâ€™s spring segment alters titin splicing in mouse skeletal muscle and causes myopathy. Journal of General Physiology, 2014, 143, 215-230.	1.9	45
9	Increased myocardial stiffness due to cardiac titin isoform switching in a mouse model of volume overload limits eccentric remodeling. Journal of Molecular and Cellular Cardiology, 2015, 79, 104-114.	1.9	41
10	Consequences of Increasing Heart Rate on Deceleration Time, the Velocityâ€“Time Integral, and E/A. American Journal of Cardiology, 2006, 97, 130-136.	1.6	38
11	Is left ventricular volume during diastasis the real equilibrium volume, and what is its relationship to diastolic suction?. Journal of Applied Physiology, 2008, 105, 1012-1014.	2.5	35
12	Titin-Actin Interaction: PEVK-Actin-Based Viscosity in a Large Animal. Journal of Biomedicine and Biotechnology, 2011, 2011, 1-8.	3.0	35
13	The peak atrioventricular pressure gradient to transmitral flow relation: Kinematic model prediction with in vivo validation. Journal of the American Society of Echocardiography, 2004, 17, 839-844.	2.8	34
14	Diabetes and diastolic function: Stiffness and relaxation from transmitral flow. Ultrasound in Medicine and Biology, 2005, 31, 1589-1596.	1.5	34
15	Titin based viscosity in ventricular physiology: An integrative investigation of PEVKâ€“actin interactions. Journal of Molecular and Cellular Cardiology, 2011, 51, 428-434.	1.9	34
16	Physical determinants of left ventricular isovolumic pressure decline: model prediction with in vivo validation. American Journal of Physiology - Heart and Circulatory Physiology, 2008, 294, H1589-H1596.	3.2	32
17	Myocardial relaxation is accelerated by fast stretch, not reduced afterload. Journal of Molecular and Cellular Cardiology, 2017, 103, 65-73.	1.9	28
18	Isovolumic pressure-to-early rapid filling decay rate relation: model-based derivation and validation via simultaneous catheterization echocardiography. Journal of Applied Physiology, 2006, 100, 528-534.	2.5	27

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19	SMYD2 glutathionylation contributes to degradation of sarcomeric proteins. Nature Communications, 2018, 9, 4341.	12.8	27
20	Point: Left ventricular volume during diastasis is the physiological in vivo equilibrium volume and is related to diastolic suction. Journal of Applied Physiology, 2010, 109, 606-608.	2.5	25
21	Titin-Isoform Dependence of Titin-Actin Interaction and Its Regulation by S100A1/<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:msup><mml:mtext>Ca</mml:mtext><mml:mrow><mml:mtext>2</mml:mtext></mml:mrow></mml:msup></mml:math> Skinned Myocardium. Journal of Biomedicine and Biotechnology, 2010, 2010, 1-9.	3.0	23
22	What global diastolic function is, what it is not, and how to measure it. American Journal of Physiology - Heart and Circulatory Physiology, 2015, 309, H1392-H1406.	3.2	25
23	Diastolic ventricular-vascular stiffness and relaxation relation: elucidation of coupling via pressure phase plane-derived indexes. American Journal of Physiology - Heart and Circulatory Physiology, 2006, 291, H2415-H2423.	3.2	20
24	Temperature and transmural region influence functional measurements in unloaded left ventricular cardiomyocytes. Physiological Reports, 2013, 1, e00158.	1.7	19
25	Muscle metaboreflex-induced increases in effective arterial elastance: effect of heart failure. American Journal of Physiology - Regulatory Integrative and Comparative Physiology, 2020, 319, R1-R10.	1.8	12
26	The Kinematic Filling Efficiency Index of the Left Ventricle: Contrasting Normal vs. Diabetic Physiology. Ultrasound in Medicine and Biology, 2007, 33, 842-850.	1.5	11
27	Aortic Stiffness and Diastolic Dysfunction in Sprague Dawley Rats Consuming Short-Term Fructose Plus High Salt Diet . Integrated Blood Pressure Control, 2020, Volume 13, 111-124.	1.2	10
28	Fructose plus High-Salt Diet in Early Life Results in Salt-Sensitive Cardiovascular Changes in Mature Male Sprague Dawley Rats. Nutrients, 2021, 13, 3129.	4.1	10
29	Heart Rate Is an Important Consideration for Cardiac Imaging of Diastolic Function. JACC: Cardiovascular Imaging, 2016, 9, 756-758.	5.3	9
30	Binge Alcohol Exposure in Adolescence Impairs Normal Heart Growth. Journal of the American Heart Association, 2020, 9, e015611.	3.7	9
31	The link between exercise and titin passive stiffness. Experimental Physiology, 2017, 102, 1055-1066.	2.0	8
32	Deleting Titinâ€™s C-Terminal PEVK Exons Increases Passive Stiffness, Alters Splicing, and Induces Cross-Sectional and Longitudinal Hypertrophy in Skeletal Muscle. Frontiers in Physiology, 2020, 11, 494.	2.8	8
33	Pressure Phase-plane Based Determination of the Onset of Left Ventricular Relaxation. Cardiovascular Engineering (Dordrecht, Netherlands), 2007, 7, 162-171.	1.0	7
34	Increased myocardial short-range forces in a rodent model of diabetes reflect elevated content of Î² myosin heavy chain. Archives of Biochemistry and Biophysics, 2014, 552-553, 92-99.	3.0	7
35	Myocyte contractility can be maintained by storing cells with the myosin ATPase inhibitor 2,3 butanedione monoxime. Physiological Reports, 2015, 3, e12445.	1.7	7
36	Myocardial Fiber Mapping of Rat Hearts, Using Apparent Backscatter, with Histologic Validation. Ultrasound in Medicine and Biology, 2019, 45, 2075-2085.	1.5	7

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37	How myofilament strain and strain rate lead the dance of the cardiac cycle. Archives of Biochemistry and Biophysics, 2019, 664, 62-67.	3.0	5
38	Derivation and Left Ventricular Pressure Phase Plane Based Validation of a Time Dependent Isometric Crossbridge Attachment Model. Cardiovascular Engineering (Dordrecht, Netherlands), 2006, 6, 132-144.	1.0	4
39	Last Word on Viewpoint: Is left ventricular volume during diastasis the real equilibrium volume, and what is its relationship to diastolic suction?. Journal of Applied Physiology, 2008, 105, 1019-1019.	2.5	4
40	The Multifunctional Calcium/Calmodulin-Dependent Protein Kinase II Delta (CaMKIIÎ´) Phosphorylates Titin N2B and PEVK Spring Elements. Biophysical Journal, 2012, 102, 559a.	0.5	4
41	Membrane stabilizer Poloxamer 188 improves yield of primary isolated rat cardiomyocytes without impairing function. Physiological Reports, 2020, 8, e14382.	1.7	4
42	Reduced preload increases Mechanical Control (strain-rate dependence) of Relaxation by modifying myosin kinetics. Archives of Biochemistry and Biophysics, 2021, 707, 108909.	3.0	3
43	Compliant Titin Isoform Content Is Reduced in Left Ventricles of Sedentary Versus Active Rats. Frontiers in Physiology, 2020, 11, 15.	2.8	2
44	Move quickly to detach: Strain rateâ€“dependent myosin detachment and cardiac relaxation. Journal of General Physiology, 2020, 152, .	1.9	2
45	Last Word on Point:Counterpoint: Left ventricular volume during diastasis is the physiological in vivo equilibrium volume and is related to diastolic suction. Journal of Applied Physiology, 2010, 109, 615-615.	2.5	1
46	End Systolic Strain Rate, not Afterload, Controls Myocardial Relaxation. Biophysical Journal, 2014, 106, 646a.	0.5	1
47	Myocardial Strain Rate Modulates the Speed of Relaxation in Dynamically Loaded Twitch Contractions. Biophysical Journal, 2015, 108, 200a.	0.5	1
48	Differential Effects of Isoproterenol on Regional Myocardial Mechanics in Rat Using Three-Dimensional Cine DENSE Cardiovascular Magnetic Resonance. Journal of Biomechanical Engineering, 2019, 141, .	1.3	1
49	Effect of Excision of Titin's PEVK Exons 219-225 on Skeletal Muscle Structure and Function. Biophysical Journal, 2010, 98, 544a-545a.	0.5	0
50	Quantification of Titin Based Viscosity: Temperature, Lattice Compression and Integrative Physiology. Biophysical Journal, 2011, 100, 455a.	0.5	0
51	Passive Properties of the Isolated Mouse Heart: Titin, Collagen and the Working Sarcomere Length Range. Biophysical Journal, 2011, 100, 344a.	0.5	0
52	A New Mouse Model in which the Proximal Tandem Ig Element of Titin is Truncated (IGKO) - Assessment of Diastolic Function. Biophysical Journal, 2012, 102, 436a.	0.5	0
53	Removal of Ig Domains of Titin Alters Contractility in Mouse Soleus Muscle. Biophysical Journal, 2012, 102, 360a.	0.5	0
54	Removal of Proximal IG Domains of Titin in Soleus Muscle Results in Differential Splicing of Titin MRNA. Biophysical Journal, 2013, 104, 310a.	0.5	0

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55	Passive Viscosity Decreases with Deletion of PEVK Region of Cardiac Titin. Biophysical Journal, 2013, 104, 310a-311a.	0.5	0
56	Shortening of Titin's Elastic Tandem Ig Segment Leads to Cardiac Hypertrophy and Diastolic Dysfunction. Biophysical Journal, 2013, 104, 158a.	0.5	0
57	Temperature and Transmural Region Influence Functional Measurements in Unloaded Left Ventricular Cardiomyocytes. Biophysical Journal, 2014, 106, 564a.	0.5	0
58	Early detection of abnormal left ventricular relaxation in acute myocardial ischemia with a quadratic model. Med Eng Phys 2014;36(September (9)):1101â€“5 by Morimont et al.. Medical Engineering and Physics, 2015, 37, 826.	1.7	0
59	Storage using BDM or Blebbistatin Preserves Functional Measures of Unloaded Cardiomyocytes. Biophysical Journal, 2015, 108, 295a.	0.5	0