Michael W Klymkowsky

List of Publications by Year in Descending Order

92 papers	4,774 citations	37 h-index	68 g-index
163 ext. papers	5,145 ext. citations	6.3 avg, IF	5.64 L-index

#	Paper	IF	Citations
92	Aligning Assessment Goals with the Current and Future Technologies Needed to Achieve Them **2022**, 241-257		
91	Making mechanistic sense: are we teaching students what they need to know?. *Developmental Biology*, **2021**, 476, 308-313	3.1	
90	Comment on Should Organic Chemistry Be Taught as Science? *Journal of Chemical Education*, **2020**, 97, 1213-1214	2.4	2
89	Concept Inventories: Design, Application, Uses, Limitations, and Next Steps **2020**, 775-790		4
88	Organic Chemistry, Life, the Universe and Everything (OCLUE): A Transformed Organic Chemistry Curriculum. *Journal of Chemical Education*, **2019**, 96, 1858-1872	2.4	37
87	Filaments and phenotypes: cellular roles and orphan effects associated with mutations in cytoplasmic intermediate filament proteins. *F1000Research*, **2019**, 8,	3.6	6
86	Whole-Mount Immunocytochemistry in. *Cold Spring Harbor Protocols*, **2018**, 2018,	1.2	5
85	Diagnostic of students' misconceptions using the Biological Concepts Instrument (BCI): A method for conducting an educational needs assessment. *PLoS ONE*, **2017**, 12, e0176906	3.7	12
84	Nuclear roles for cilia-associated proteins. *Cilia*, **2017**, 6, 8	5.5	10
83	TSPAN12 Is a Norrin Co-receptor that Amplifies Frizzled4 Ligand Selectivity and Signaling. *Cell Reports*, **2017**, 19, 2809-2822	10.6	41
82	Identifying domains of EFHC1 involved in ciliary localization, ciliogenesis, and the regulation of Wnt signaling. *Developmental Biology*, **2016**, 411, 257-265	3.1	13
81	The Design and Transformation of Biofundamentals: A Nonsurvey Introductory Evolutionary and Molecular Biology Course. *CBE Life Sciences Education*, **2016**, 15,	3.4	4
80	CRISPR/Cas9-mediated mutagenesis in the sea lamprey Petromyzon marinus: a powerful tool for understanding ancestral gene functions in vertebrates. *Development (Cambridge)*, **2015**, 142, 4180-7	6.6	45
79	Are Noncovalent Interactions an Achilles Heel in Chemistry Education? A Comparison of Instructional Approaches. *Journal of Chemical Education*, **2015**, 92, 1979-1987	2.4	44
78	Centrin-2 (Cetn2) mediated regulation of FGF/FGFR gene expression in Xenopus. *Scientific Reports*, **2015**, 5, 10283	4.9	12
77	Classroom Uses for BeSocratic. *Human-computer Interaction Series*, **2015**, 127-136	0.6	7
76	NEXUS/Physics: An interdisciplinary repurposing of physics for biologists. *American Journal of Physics*, **2014**, 82, 368-377	0.7	52

75	Chibby functions in Xenopus ciliary assembly, embryonic development, and the regulation of gene expression. *Developmental Biology*, **2014**, 395, 287-98	3.1	13
74	A Short History of the Use of Technology To Model and Analyze Student Data for Teaching and Research. *ACS Symposium Series*, **2014**, 219-239	0.4	22
73	Energy in Chemical Systems: An Integrated Approach **2014**, 301-316		6
72	Chemistry, Life, the Universe, and Everything: A New Approach to General Chemistry, and a Model for Curriculum Reform. *Journal of Chemical Education*, **2013**, 90, 1116-1122	2.4	114
71	Making educational games that work in the classroom: A new approach for integrating STEM simulations **2013**,		5
70	The trouble with chemical energy: why understanding bond energies requires an interdisciplinary systems approach. *CBE Life Sciences Education*, **2013**, 12, 306-12	3.4	50
69	Teaching data structures with beSocratic **2013**,		4
68	Development and Assessment of a Molecular Structure and Properties Learning Progression. *Journal of Chemical Education*, **2012**, 89, 1351-1357	2.4	80
67	Using graph-based assessments within socratic tutorials to reveal and refine students' analytical thinking about molecular networks. *Biochemistry and Molecular Biology Education*, **2012**, 40, 100-7	1.3	8
66	Now for the hard part: the path to coherent curricular design. *Biochemistry and Molecular Biology Education*, **2012**, 40, 271-2	1.3	5
65	A maternally established SoxB1/SoxF axis is a conserved feature of chordate germ layer patterning. *Evolution & Development*, **2012**, 14, 104-15	2.6	8
64	Analyzing and visualizing student work withBeSocratic **2012**,		3
63	sizzled function and secreted factor network dynamics. *Biology Open*, **2012**, 1, 286-94	2.2	
62	Turning randomness into meaning at the molecular level using Muller's morphs. *Biology Open*, **2012** , 1, 405-10	2.2	5
61	Mitochondrial activity, embryogenesis, and the dialogue between the big and little brains of the cell. *Mitochondrion*, **2011**, 11, 814-9	4.9	7
60	Snail2 controls mesodermal BMP/Wnt induction of neural crest. *Development (Cambridge)*, **2011**, 138, 3135-45	6.6	31
59	Mechanisms driving neural crest induction and migration in the zebrafish and Xenopus laevis. *Cell Adhesion and Migration*, **2010**, 4, 595-608	3.2	29
58	Lost in Lewis Structures: An Investigation of Student Difficulties in Developing Representational Competence. *Journal of Chemical Education*, **2010**, 87, 869-874	2.4	121

57	Regulation of TCF3 by Wnt-dependent phosphorylation during vertebrate axis specification. *Developmental Cell*, **2010**, 19, 521-32	10.2	128
56	A guide to the productive poking, prodding and injection of cells. *Development (Cambridge)*, **2009**, 136, 4070-4072	6.6	
55	Make room for computing. *Science*, **2009**, 326, 227	33.3	6
54	Unexpected functional redundancy between Twist and Slug (Snail2) and their feedback regulation of NF-kappaB via Nodal and Cerberus. *Developmental Biology*, **2009**, 331, 340-9	3.1	37
53	Epithelial-mesenchymal transition: a cancer researcher's conceptual friend and foe. *American Journal of Pathology*, **2009**, 174, 1588-93	5.8	400
52	Foundational Physiochemical Concepts in the Biological Sciences. *FASEB Journal*, **2009**, 23, 464.3	0.9	
51	Understanding randomness and its impact on student learning: lessons learned from building the Biology Concept Inventory (BCI). *CBE Life Sciences Education*, **2008**, 7, 227-33	3.4	133
50	Rohon-Beard sensory neurons are induced by BMP4 expressing non-neural ectoderm in Xenopus laevis. *Developmental Biology*, **2008**, 314, 351-61	3.1	19
49	Eya1 and Six1 promote neurogenesis in the cranial placodes in a SoxB1-dependent fashion. *Developmental Biology*, **2008**, 320, 199-214	3.1	84
48	Recognizing student misconceptions through Ed's Tools and the Biology Concept Inventory. *PLoS Biology*, **2008**, 6, e3	9.7	65
47	The Sox axis, Nodal signaling, and germ layer specification. *Differentiation*, **2007**, 75, 536-45	3.5	33
46	Building, using, and maximizing the impact of concept inventories in the biological sciences: report on a National Science Foundation sponsored conference on the construction of concept inventories in the biological sciences. *CBE Life Sciences Education*, **2007**, 6, 277-82	3.4	55
45	Sox3 expression identifies neural progenitors in persistent neonatal and adult mouse forebrain germinative zones. *Journal of Comparative Neurology*, **2006**, 497, 88-100	3.4	87
44	An NF-kappaB and slug regulatory loop active in early vertebrate mesoderm. *PLoS ONE*, **2006**, 1, e106	3.7	44
43	SOX7 is an immediate-early target of VegT and regulates Nodal-related gene expression in Xenopus. *Developmental Biology*, **2005**, 278, 526-41	3.1	39
42	SOX7 and SOX18 are essential for cardiogenesis in Xenopus. *Developmental Dynamics*, **2005**, 234, 878-91	2.9	68
41	Points of view: content versus process: is this a fair choice? Undergraduate biology courses for nonscientists: toward a lived curriculum. *CBE: Life Sciences Education*, **2005**, 4, 189-96		21
40	Wnt Signaling Networks and Embryonic Patterning **2005**, 267-287		

39	Embryonic expression of Xenopus laevis SOX7. *Gene Expression Patterns*, **2004**, 4, 29-33	1.5	26
38	Repression of nodal expression by maternal B1-type SOXs regulates germ layer formation in Xenopus and zebrafish. *Developmental Biology*, **2004**, 273, 23-37	3.1	51
37	Acute effects of desmin mutations on cytoskeletal and cellular integrity in cardiac myocytes. *Cytoskeleton*, **2003**, 54, 105-21		15
36	Bioliteracy and teaching efficacy: what biologists can learn from physicists. *CBE: Life Sciences Education*, **2003**, 2, 155-61		54
35	Limb development in a "nonmodel" vertebrate, the direct-developing frog Eleutherodactylus coqui. *The Journal of Experimental Zoology*, **2001**, 291, 375-88		35
34	Cadherins and catenins, Wnts and SOXs: embryonic patterning in Xenopus. *International Review of Cytology*, **2001**, 203, 291-355		16
33	A comparative evaluation of beta-catenin and plakoglobin signaling activity. *Oncogene*, **2000**, 19, 5720-8	9.2	60
32	Membrane-anchored plakoglobins have multiple mechanisms of action in Wnt signaling. *Molecular Biology of the Cell*, **1999**, 10, 3151-69	3.5	45
31	Plakophilin, armadillo repeats, and nuclear localization. *Microscopy Research and Technique*, **1999**, 45, 43-54	2.8	29
30	Regulation of Wnt signaling by Sox proteins: XSox17 alpha/beta and XSox3 physically interact with beta-catenin. *Molecular Cell*, **1999**, 4, 487-98	17.6	307
29	Inhibition of neural crest migration in Xenopus using antisense slug RNA. *Developmental Biology*, **1999**, 213, 101-15	3.1	124
28	Jaw muscle development as evidence for embryonic repatterning in direct-developing frogs. *Proceedings of the Royal Society B: Biological Sciences*, **1997**, 264, 1349-54	4.4	39
27	Cytoplasmically anchored plakoglobin induces a WNT-like phenotype in Xenopus. *Developmental Biology*, **1997**, 185, 67-81	3.1	66
26	Localizing the adhesive and signaling functions of plakoglobin. *Genesis*, **1997**, 20, 91-102		43
25	Intermediate filaments as dynamic structures. *Cancer and Metastasis Reviews*, **1996**, 15, 417-28	9.6	8
24	Intermediate filaments: new proteins, some answers, more questions. *Current Opinion in Cell Biology*, **1995**, 7, 46-54	9	88
23	The body language of cells: the intimate connection between cell adhesion and behavior. *Cell*, **1995** , 83, 5-8	56.2	103
22	Intermediate filament organization, reorganization, and function in the clawed frog Xenopus. *Current Topics in Developmental Biology*, **1995**, 31, 455-86	5.3	17

21	Chapter 7 Intermediate filaments: A medical overview. *Principles of Medical Biology*, **1995**, 2, 147-188		1
20	Type II collagen distribution during cranial development in Xenopus laevis. *Anatomy and Embryology*, **1994**, 189, 81-9		26
19	Desmin organization during the differentiation of the dorsal myotome in Xenopus laevis. *Differentiation*, **1994**, 56, 31-8	3.5	18
18	Morphogenesis and the cytoskeleton: studies of the Xenopus embryo. *Developmental Biology*, **1994** , 165, 372-84	3.1	34
17	Differential organization of desmin and vimentin in muscle is due to differences in their head domains. *Journal of Cell Biology*, **1994**, 126, 445-56	7.3	30
16	Cranial ontogeny in the direct-developing frog, Eleutherodactylus coqui (Anura: Leptodactylidae), analyzed using whole-mount immunohistochemistry. *Journal of Morphology*, **1992**, 211, 95-118	1.6	89
15	Whole-mount staining of Xenopus and other vertebrates. *Methods in Cell Biology*, **1991**, 36, 419-41	1.8	166
14	Functions of intermediate filaments. *Cytoskeleton*, **1989**, 14, 309-31		154
13	MPF-induced breakdown of cytokeratin filament organization in the maturing Xenopus oocyte depends upon the translation of maternal mRNAs. *Developmental Biology*, **1989**, 134, 479-85	3.1	35
12	The appearance of acetylated alpha-tubulin during early development and cellular differentiation in Xenopus. *Developmental Biology*, **1989**, 136, 104-17	3.1	133
11	Whole-Mount Analyses of Cytoskeletal Reorganization and Function during Oogenesis and Early Embryogenesis in Xenopus **1989**, 63-103		26
10	Metabolic inhibitors and intermediate filament organization in human fibroblasts. *Experimental Cell Research*, **1988**, 174, 282-90	4.2	37
9	Metabolic inhibitors and mitosis: I. Effects of dinitrophenol/deoxyglucose and nocodazole on the live spindle. *Protoplasma*, **1986**, 131, 47-59	3.4	19
8	Metabolic inhibitors and mitosis: II. Effects of dinitrophenol/deoxyglucose and nocodazole on the microtubule cytoskeleton. *Protoplasma*, **1986**, 131, 60-74	3.4	19
7	Cellular and secreted forms of acetylcholinesterase in mouse muscle cultures. *Journal of Neurochemistry*, **1985**, 45, 1932-40	6	12
6	Structure and function of an acetylcholine receptor. *Biophysical Journal*, **1982**, 37, 371-83	2.9	265
5	Intermediate filaments in 3T3 cells collapse after intracellular injection of a monoclonal anti-intermediate filament antibody. *Nature*, **1981**, 291, 249-51	50.4	152
4	Immunospecific identification and three-dimensional structure of a membrane-bound acetylcholine receptor from Torpedo californica. *Journal of Molecular Biology*, **1979**, 128, 319-34	6.5	135

3	Structural studies of a membrane-bound acetylcholine receptor from Torpedo californica. *Journal of Molecular Biology*, **1977**, 116, 635-59	6.5	172
2	Debunking Key and Lock Biology: Exploring the prevalence and persistence of students misconceptions on the nature and flexibility of molecular interactions . *Matters Select*,	1	2
1	Cerebral organoid proteomics reveals signatures of dysregulated cortical development associated with human trisomy 21		5