Laura Ballerini

List of Publications by Year in Descending Order

98 papers	8,376 citations	38 h-index	91 g-index
108 ext. papers	9,477 ext. citations	8 avg, IF	5.49 L-index

#	Paper	IF	Citations
98	Nanostructures to Potentiate Axon Navigation and Regrowth in the Damaged Central Nervous Tissue **2022**, 79-97		
97	Diverse inflammatory threats modulate astrocytes Ca signaling via connexin43 hemichannels in organotypic spinal slices. *Molecular Brain*, **2021**, 14, 159	4.5	2
96	Graphene oxide prevents lateral amygdala dysfunctional synaptic plasticity and reverts long lasting anxiety behavior in rats. *Biomaterials*, **2021**, 271, 120749	15.6	3
95	Shedding plasma membrane vesicles induced by graphene oxide nanoflakes in brain cultured astrocytes. *Carbon*, **2021**, 176, 458-469	10.4	1
94	Infrared Nanospectroscopy of Individual Extracellular Microvesicles. *Molecules*, **2021**, 26,	4.8	2
93	Polystyrene Nanopillars with Inbuilt Carbon Nanotubes Enable Synaptic Modulation and Stimulation in Interfaced Neuronal Networks. *Advanced Materials Interfaces*, **2021**, 8, 2002121	4.6	3
92	Graphene-Based Nanomaterials for Neuroengineering: Recent Advances and Future Prospective. *Advanced Functional Materials*, **2021**, 31, 2104887	15.6	4
91	Nanomedicine and graphene-based materials: advanced technologies for potential treatments of diseases in the developing nervous system. *Pediatric Research*, **2021**,	3.2	3
90	Foetal neural progenitors contribute to postnatal circuits formation ex vivo: an electrophysiological investigation. *Molecular Brain*, **2020**, 13, 78	4.5	
89	Foxg1 Upregulation Enhances Neocortical Activity. *Cerebral Cortex*, **2020**, 30, 5147-5165	5.1	2
88	BDNF impact on synaptic dynamics: extra or intracellular long-term release differently regulates cultured hippocampal synapses. *Molecular Brain*, **2020**, 13, 43	4.5	15
87	Thin graphene oxide nanoflakes modulate glutamatergic synapses in the amygdala cultured circuits: Exploiting synaptic approaches to anxiety disorders. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2020**, 26, 102174	6	3
86	Tuning Neuronal Circuit Formation in 3D Polymeric Scaffolds by Introducing Graphene at the Bio/Material Interface. *Advanced Biology*, **2020**, 4, e1900233	3.5	8
85	Bilirubin disrupts calcium homeostasis in neonatal hippocampal neurons: a new pathway of neurotoxicity. *Archives of Toxicology*, **2020**, 94, 845-855	5.8	5
84	Functional rewiring across spinal injuries via biomimetic nanofiber scaffolds. *Proceedings of the National Academy of Sciences of the United States of America*, **2020**, 117, 25212-25218	11.5	8
83	Hybrid Interfaces Made of Nanotubes and Backbone-Altered Dipeptides Tune Neuronal Network Architecture. *ACS Chemical Neuroscience*, **2020**, 11, 162-172	5.7	5
82	Interfacing Neurons with Nanostructured Electrodes Modulates Synaptic Circuit Features. *Advanced Biology*, **2020**, 4, e2000117	3.5	5

81	Transparent carbon nanotubes promote the outgrowth of enthorino-dentate projections in lesioned organ slice cultures. *Developmental Neurobiology*, **2020**, 80, 316-331	3.2	6
80	Optimization of Organotypic Cultures of Mouse Spleen for Staining and Functional Assays. *Frontiers in Immunology*, **2020**, 11, 471	8.4	2
79	Cytokine inflammatory threat, but not LPS one, shortens GABAergic synaptic currents in the mouse spinal cord organotypic cultures. *Journal of Neuroinflammation*, **2019**, 16, 127	10.1	4
78	3D Organotypic Spinal Cultures: Exploring Neuron and Neuroglia Responses Upon Prolonged Exposure to Graphene Oxide. *Frontiers in Systems Neuroscience*, **2019**, 13, 1	3.5	19
77	Graphene Oxide Flakes Tune Excitatory Neurotransmission in Vivo by Targeting Hippocampal Synapses. *Nano Letters*, **2019**, 19, 2858-2870	11.5	26
76	Chemically Cross-Linked Carbon Nanotube Films Engineered to Control Neuronal Signaling. *ACS Nano*, **2019**, 13, 8879-8889	16.7	15
75	Properties and behavior of carbon nanomaterials when interfacing neuronal cells: How far have we come?. *Carbon*, **2019**, 143, 430-446	10.4	80
74	Advances in Nano Neuroscience: From Nanomaterials to Nanotools. *Frontiers in Neuroscience*, **2018**, 12, 953	5.1	25
73	Exploiting natural polysaccharides to enhance in vitro bio-constructs of primary neurons and progenitor cells. *Acta Biomaterialia*, **2018**, 73, 285-301	10.8	19
72	Nanomaterials at the neural interface. *Current Opinion in Neurobiology*, **2018**, 50, 50-55	7.6	37
71	Nanostructures to Engineer 3D Neural-Interfaces: Directing Axonal Navigation toward Successful Bridging of Spinal Segments. *Advanced Functional Materials*, **2018**, 28, 1700550	15.6	17
70	Preparation of Cytocompatible ITO Neuroelectrodes with Enhanced Electrochemical Characteristics Using a Facile Anodic Oxidation Process. *Advanced Functional Materials*, **2018**, 28, 1605035	15.6	12
69	Sculpting neurotransmission during synaptic development by 2D nanostructured interfaces. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2018**, 14, 2521-2532	6	21
68	Bridging pro-inflammatory signals, synaptic transmission and protection in spinal explants in vitro. *Molecular Brain*, **2018**, 11, 3	4.5	6
67	Attenuated Glial Reactivity on Topographically Functionalized Poly(3,4-Ethylenedioxythiophene):P-Toluene Sulfonate (PEDOT:PTS) Neuroelectrodes Fabricated by Microimprint Lithography. *Small*, **2018**, 14, e1800863	11	18
66	Single-layer graphene modulates neuronal communication and augments membrane ion currents. *Nature Nanotechnology*, **2018**, 13, 755-764	28.7	78
65	Safety Assessment of Graphene-Based Materials: Focus on Human Health and the Environment. *ACS Nano*, **2018**, 12, 10582-10620	16.7	292
64	Nanomaterials for stimulating nerve growth. *Science*, **2017**, 356, 1010-1011	33.3	53

63	Diverse Applications of Nanomedicine. *ACS Nano*, **2017**, 11, 2313-2381	16.7	714
62	7.32 Engineering the Neural Interface **2017**, 642-660		2
61	Graphene Improves the Biocompatibility of Polyacrylamide Hydrogels: 3D Polymeric Scaffolds for Neuronal Growth. *Scientific Reports*, **2017**, 7, 10942	4.9	59
60	Successful Regrowth of Retinal Neurons When Cultured Interfaced to Carbon Nanotube Platforms. *Journal of Biomedical Nanotechnology*, **2017**, 13, 559-565	4	8
59	Carbon based substrates for interfacing neurons: Comparing pristine with functionalized carbon nanotubes effects on cultured neuronal networks. *Carbon*, **2016**, 97, 87-91	10.4	26
58	3D meshes of carbon nanotubes guide functional reconnection of segregated spinal explants. *Science Advances*, **2016**, 2, e1600087	14.3	66
57	Electrical Stimulation Able to Trigger Locomotor Spinal Circuits Also Induces Dorsal Horn Activity. *Neuromodulation*, **2016**, 19, 38-46	3.1	4
56	Graphene-Based Interfaces Do Not Alter Target Nerve Cells. *ACS Nano*, **2016**, 10, 615-23	16.7	172
55	Altered development in GABA co-release shapes glycinergic synaptic currents in cultured spinal slices of the SOD1(G93A) mouse model of amyotrophic lateral sclerosis. *Journal of Physiology*, **2016** , 594, 3827-40	3.9	14
54	Graphene Oxide Nanosheets Reshape Synaptic Function in Cultured Brain Networks. *ACS Nano*, **2016**, 10, 4459-71	16.7	101
53	From 2D to 3D: novel nanostructured scaffolds to investigate signalling in reconstructed neuronal networks. *Scientific Reports*, **2015**, 5, 9562	4.9	105
52	Science and technology roadmap for graphene, related two-dimensional crystals, and hybrid systems. *Nanoscale*, **2015**, 7, 4598-810	7.7	2015
51	PEDOT:PSS Interfaces Support the Development of Neuronal Synaptic Networks with Reduced Neuroglia Response In vitro. *Frontiers in Neuroscience*, **2015**, 9, 521	5.1	41
50	Classification framework for graphene-based materials. *Angewandte Chemie - International Edition*, **2014**, 53, 7714-8	16.4	287
49	Carbon nanotubes in tissue engineering. *Topics in Current Chemistry*, **2014**, 348, 181-204		21
48	Rahmenbedingungen für die Klassifizierung graphenbasierter Materialien. *Angewandte Chemie*, **2014**, 126, 7846-7850	3.6	6
47	Carbon nanotube facilitation of myocardial ablation with radiofrequency energy. *Journal of Cardiovascular Electrophysiology*, **2014**, 25, 1385-90	2.7	23
46	Carbon nanotubes in neuroregeneration and repair. *Advanced Drug Delivery Reviews*, **2013**, 65, 2034-44	18.5	111

45	Carbon nanotubes instruct physiological growth and functionally mature syncytia: nongenetic engineering of cardiac myocytes. *ACS Nano*, **2013**, 7, 5746-56	16.7	92
44	Carbon nanotube scaffolds instruct human dendritic cells: modulating immune responses by contacts at the nanoscale. *Nano Letters*, **2013**, 13, 6098-105	11.5	49
43	Carbon nanotubes: a promise for nerve tissue engineering?. *Nanotechnology Reviews*, **2013**, 2, 47-57	6.3	29
42	Adhesion to carbon nanotube conductive scaffolds forces action-potential appearance in immature rat spinal neurons. *PLoS ONE*, **2013**, 8, e73621	3.7	49
41	Improving cardiac myocytes performance by carbon nanotubes platforms. *Frontiers in Physiology*, **2013**, 4, 239	4.6	44
40	Carbon nanotubes: artificial nanomaterials to engineer single neurons and neuronal networks. *ACS Chemical Neuroscience*, **2012**, 3, 611-8	5.7	85
39	Spinal cord explants use carbon nanotube interfaces to enhance neurite outgrowth and to fortify synaptic inputs. *ACS Nano*, **2012**, 6, 2041-55	16.7	112
38	Carbon nanotubes promote growth and spontaneous electrical activity in cultured cardiac myocytes. *Nano Letters*, **2012**, 12, 1831-8	11.5	175
37	Carbon Nanotubes as Electrical Interfaces to Neurons. *Fundamental Biomedical Technologies*, **2012**, 187-207		1
36	Interfacing neurons with carbon nanotubes: (re)engineering neuronal signaling. *Progress in Brain Research*, **2011**, 194, 241-52	2.9	20
35	Carbon nanotube scaffolds tune synaptic strength in cultured neural circuits: novel frontiers in nanomaterial-tissue interactions. *Journal of Neuroscience*, **2011**, 31, 12945-53	6.6	132
34	Neurons are able to internalize soluble carbon nanotubes: new opportunities or old risks?. *Small*, **2010**, 6, 2630-3	11	26
33	Nanomaterials for Neural Interfaces. *Advanced Materials*, **2009**, 21, 3970-4004	24	422
32	Carbon Nanotubes Carrying Cell-Adhesion Peptides do not Interfere with Neuronal Functionality. *Advanced Materials*, **2009**, 21, 2903-2908	24	60
31	Insights into medio-lateral signalling in the developing mouse hindbrain: properties of midline drivers of network activity. *Journal of Physiology*, **2009**, 587, 5007	3.9	
30	Carbon nanotubes might improve neuronal performance by favouring electrical shortcuts. *Nature Nanotechnology*, **2009**, 4, 126-33	28.7	428
29	The patterns of spontaneous Ca2+ signals generated by ventral spinal neurons in vitro show time-dependent refinement. *European Journal of Neuroscience*, **2009**, 29, 1543-59	3.5	10
28	GABAergic and glycinergic interneuron expression during spinal cord development: dynamic interplay between inhibition and excitation in the control of ventral network outputs. *Progress in Neurobiology*, **2009**, 89, 46-60	10.9	38

27	Interactions Between Cultured Neurons and Carbon Nanotubes: A Nanoneuroscience Vignette. *Journal of Nanoneuroscience*, **2009**, 1, 10-16		40
26	Nanomaterial/neuronal hybrid system for functional recovery of the CNS. *Drug Discovery Today: Disease Models*, **2008**, 5, 37-43	1.3	10
25	Bridging multiple levels of exploration: towards a neuroengineering-based approach to physiological and pathological problems in neuroscience. *Frontiers in Neuroscience*, **2008**, 2, 24-5	5.1	2
24	Activity-independent intracellular Ca2+ oscillations are spontaneously generated by ventral spinal neurons during development in vitro. *Cell Calcium*, **2007**, 41, 317-29	4	23
23	Interfacing neurons with carbon nanotubes: electrical signal transfer and synaptic stimulation in cultured brain circuits. *Journal of Neuroscience*, **2007**, 27, 6931-6	6.6	282
22	ERG conductance expression modulates the excitability of ventral horn GABAergic interneurons that control rhythmic oscillations in the developing mouse spinal cord. *Journal of Neuroscience*, **2007**, 27, 919-28	6.6	46
21	Early signs of motoneuron vulnerability in a disease model system: Characterization of transverse slice cultures of spinal cord isolated from embryonic ALS mice. *Neuroscience*, **2006**, 138, 1179-94	3.9	50
20	Interneurons transiently express the ERG K+ channels during development of mouse spinal networks in vitro. *Neuroscience*, **2005**, 135, 1179-92	3.9	29
19	Carbon nanotube substrates boost neuronal electrical signaling. *Nano Letters*, **2005**, 5, 1107-10	11.5	546
18	Interneurone bursts are spontaneously associated with muscle contractions only during early phases of mouse spinal network development: a study in organotypic cultures. *European Journal of Neuroscience*, **2004**, 20, 2697-710	3.5	26
17	Spinal circuits formation: a study of developmentally regulated markers in organotypic cultures of embryonic mouse spinal cord. *Neuroscience*, **2003**, 122, 391-405	3.9	54
16	Experimental and modeling studies of novel bursts induced by blocking na(+) pump and synaptic inhibition in the rat spinal cord. *Journal of Neurophysiology*, **2002**, 88, 676-91	3.2	28
15	Activity-dependent modulation of GABAergic synapses in developing rat spinal networks in vitro. *European Journal of Neuroscience*, **2002**, 16, 2123-35	3.5	32
14	Homeostatic plasticity induced by chronic block of AMPA/kainate receptors modulates the generation of rhythmic bursting in rat spinal cord organotypic cultures. *European Journal of Neuroscience*, **2001**, 14, 903-17	3.5	22
13	Opposite changes in synaptic activity of organotypic rat spinal cord cultures after chronic block of AMPA/kainate or glycine and GABAA receptors. *Journal of Physiology*, **2000**, 523 Pt 3, 639-51	3.9	52
12	Generation of rhythmic patterns of activity by ventral interneurones in rat organotypic spinal slice culture. *Journal of Physiology*, **1999**, 517 (Pt 2), 459-75	3.9	51
11	Antagonism by (1,2,5,6-tetrahydropyridine-4-yl) methylphosphinic acid of synaptic transmission in the neonatal rat spinal cord in vitro: an electrophysiological study. *Neuroscience*, **1999**, 90, 1085-92	3.9	22
10	Network bursting by organotypic spinal slice cultures in the presence of bicuculline and/or strychnine is developmentally regulated. *European Journal of Neuroscience*, **1998**, 10, 2871-9	3.5	38

9	Network bursting by organotypic spinal slice cultures in the presence of bicuculline and/or strychnine is developmentally regulated **1998**, 10, 2871		1
8	Pharmacological block of the electrogenic sodium pump disrupts rhythmic bursting induced by strychnine and bicuculline in the neonatal rat spinal cord. *Journal of Neurophysiology*, **1997**, 77, 17-23	3.2	62
7	Spontaneous rhythmic bursts induced by pharmacological block of inhibition in lumbar motoneurons of the neonatal rat spinal cord. *Journal of Neurophysiology*, **1996**, 75, 640-7	3.2	134
6	Localization of rhythmogenic networks responsible for spontaneous bursts induced by strychnine and bicuculline in the rat isolated spinal cord. *Journal of Neuroscience*, **1996**, 16, 7063-76	6.6	128
5	Desensitization of AMPA receptors limits the amplitude of EPSPs and the excitability of motoneurons of the rat isolated spinal cord. *European Journal of Neuroscience*, **1995**, 7, 1229-34	3.5	34
4	Electrophysiological interactions between 5-hydroxytryptamine and thyrotropin releasing hormone on rat hippocampal CA1 neurons. *European Journal of Neuroscience*, **1994**, 6, 953-60	3.5	8
3	EPSP-spike potentiation during primed burst-induced long-term potentiation in the CA1 region of rat hippocampal slices. *Neuroscience*, **1994**, 62, 1021-32	3.9	22
2	Glutamate uptake from the synaptic cleft does not shape the decay of the non-NMDA component of the synaptic current. *Neuron*, **1993**, 11, 541-9	13.9	156
1	Serotonin blocks the long-term potentiation induced by primed burst stimulation in the CA1 region of rat hippocampal slices. *Neuroscience*, **1992**, 46, 511-8	3.9	125