

# Melanie Boly

## List of Publications by Year in descending order

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Version: 2024-02-01

132  
papers

21,657  
citations

14655

66  
h-index

14759

127  
g-index

146  
all docs

146  
docs citations

146  
times ranked

10945  
citing authors

#	ARTICLE	IF	CITATIONS
1	Detecting Awareness in the Vegetative State. <i>Science</i> , 2006, 313, 1402-1402.	12.6	1,465
2	Willful Modulation of Brain Activity in Disorders of Consciousness. <i>New England Journal of Medicine</i> , 2010, 362, 579-589.	27.0	1,220
3	Neural correlates of consciousness: progress and problems. <i>Nature Reviews Neuroscience</i> , 2016, 17, 307-321.	10.2	966
4	Diagnostic accuracy of the vegetative and minimally conscious state: Clinical consensus versus standardized neurobehavioral assessment. <i>BMC Neurology</i> , 2009, 9, 35.	1.8	957
5	Integrated information theory: from consciousness to its physical substrate. <i>Nature Reviews Neuroscience</i> , 2016, 17, 450-461.	10.2	930
6	A Theoretically Based Index of Consciousness Independent of Sensory Processing and Behavior. <i>Science Translational Medicine</i> , 2013, 5, 198ra105.	12.4	839
7	Default network connectivity reflects the level of consciousness in non-communicative brain-damaged patients. <i>Brain</i> , 2010, 133, 161-171.	7.6	723
8	Breakdown of within- and between-network Resting State Functional Magnetic Resonance Imaging Connectivity during Propofol-induced Loss of Consciousness. <i>Anesthesiology</i> , 2010, 113, 1038-1053.	2.5	576
9	Rethinking segregation and integration: contributions of whole-brain modelling. <i>Nature Reviews Neuroscience</i> , 2015, 16, 430-439.	10.2	483
10	Preserved Feedforward But Impaired Top-Down Processes in the Vegetative State. <i>Science</i> , 2011, 332, 858-862.	12.6	444
11	Diagnostic precision of PET imaging and functional MRI in disorders of consciousness: a clinical validation study. <i>Lancet, The</i> , 2014, 384, 514-522.	13.7	433
12	The neural correlates of dreaming. <i>Nature Neuroscience</i> , 2017, 20, 872-878.	14.8	430
13	Perception of pain in the minimally conscious state with PET activation: an observational study. <i>Lancet Neurology, The</i> , 2008, 7, 1013-1020.	10.2	417
14	Recovery of cortical effective connectivity and recovery of consciousness in vegetative patients. <i>Brain</i> , 2012, 135, 1308-1320.	7.6	400
15	Spontaneous neural activity during human slow wave sleep. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 15160-15165.	7.1	383
16	Two Distinct Neuronal Networks Mediate the Awareness of Environment and of Self. <i>Journal of Cognitive Neuroscience</i> , 2011, 23, 570-578.	2.3	367
17	Are the Neural Correlates of Consciousness in the Front or in the Back of the Cerebral Cortex? Clinical and Neuroimaging Evidence. <i>Journal of Neuroscience</i> , 2017, 37, 9603-9613.	3.6	360
18	Sleep transforms the cerebral trace of declarative memories. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 18778-18783.	7.1	338

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19	Auditory Processing in Severely Brain Injured Patients. <i>Archives of Neurology</i> , 2004, 61, 233.	4.5	335
20	Propofol Anesthesia and Sleep: A High-Density EEG Study. <i>Sleep</i> , 2011, 34, 283-291.	1.1	326
21	Stratification of unresponsive patients by an independently validated index of brain complexity. <i>Annals of Neurology</i> , 2016, 80, 718-729.	5.3	309
22	Consciousness and Complexity during Unresponsiveness Induced by Propofol, Xenon, and Ketamine. <i>Current Biology</i> , 2015, 25, 3099-3105.	3.9	308
23	Connectivity Changes Underlying Spectral EEG Changes during Propofol-Induced Loss of Consciousness. <i>Journal of Neuroscience</i> , 2012, 32, 7082-7090.	3.6	272
24	Orbitofrontal cortex involvement in chronic analgesic-overuse headache evolving from episodic migraine. <i>Brain</i> , 2006, 129, 543-550.	7.6	271
25	Brain functional integration decreases during propofol-induced loss of consciousness. <i>NeuroImage</i> , 2011, 57, 198-205.	4.2	239
26	Age-Related Reorganizational Changes in Modularity and Functional Connectivity of Human Brain Networks. <i>Brain Connectivity</i> , 2014, 4, 662-676.	1.7	233
27	Complexity of Multi-Dimensional Spontaneous EEG Decreases during Propofol Induced General Anaesthesia. <i>PLoS ONE</i> , 2015, 10, e0133532.	2.5	231
28	Sleep-Related Hippocampo-Cortical Interplay during Emotional Memory Recollection. <i>PLoS Biology</i> , 2007, 5, e282.	5.6	225
29	Functional neuroanatomy underlying the clinical subcategorization of minimally conscious state patients. <i>Journal of Neurology</i> , 2012, 259, 1087-1098.	3.6	209
30	Human cognition during REM sleep and the activity profile within frontal and parietal cortices: a reappraisal of functional neuroimaging data. <i>Progress in Brain Research</i> , 2005, 150, 219-595.	1.4	198
31	The spectral exponent of the resting EEG indexes the presence of consciousness during unresponsiveness induced by propofol, xenon, and ketamine. <i>NeuroImage</i> , 2019, 189, 631-644.	4.2	185
32	Interplay between spontaneous and induced brain activity during human non-rapid eye movement sleep. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2011, 108, 15438-15443.	7.1	171
33	Consciousness in humans and non-human animals: recent advances and future directions. <i>Frontiers in Psychology</i> , 2013, 4, 625.	2.1	170
34	Resting-state Network-specific Breakdown of Functional Connectivity during Ketamine Alteration of Consciousness in Volunteers. <i>Anesthesiology</i> , 2016, 125, 873-888.	2.5	168
35	Hierarchical clustering of brain activity during human nonrapid eye movement sleep. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 5856-5861.	7.1	165
36	The Nociception Coma Scale: A new tool to assess nociception in disorders of consciousness. <i>Pain</i> , 2010, 148, 215-219.	4.2	153

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37	Functional neuroanatomy of the hypnotic state. <i>Journal of Physiology (Paris)</i> , 2006, 99, 463-469.	2.1	151
38	The Fate of Incoming Stimuli during NREM Sleep is Determined by Spindles and the Phase of the Slow Oscillation. <i>Frontiers in Neurology</i> , 2012, 3, 40.	2.4	139
39	Granger Causality Analysis of Steady-State Electroencephalographic Signals during Propofol-Induced Anaesthesia. <i>PLoS ONE</i> , 2012, 7, e29072.	2.5	138
40	Measuring Consciousness in Severely Damaged Brains. <i>Annual Review of Neuroscience</i> , 2014, 37, 457-478.	10.7	134
41	Measures of metabolism and complexity in the brain of patients with disorders of consciousness. <i>NeuroImage: Clinical</i> , 2017, 14, 354-362.	2.7	133
42	A perturbational approach for evaluating the brain's capacity for consciousness. <i>Progress in Brain Research</i> , 2009, 177, 201-214.	1.4	130
43	Electrophysiological correlates of behavioural changes in vigilance in vegetative state and minimally conscious state. <i>Brain</i> , 2011, 134, 2222-2232.	7.6	128
44	Identifying the default mode component in spatial IC analyses of patients with disorders of consciousness. <i>Human Brain Mapping</i> , 2012, 33, 778-796.	3.6	128
45	A French validation study of the Coma Recovery Scale-Revised (CRS-R). <i>Brain Injury</i> , 2008, 22, 786-792.	1.2	127
46	Cognitive function in the locked-in syndrome. <i>Journal of Neurology</i> , 2008, 255, 323-330.	3.6	126
47	Dynamic Change of Global and Local Information Processing in Propofol-Induced Loss and Recovery of Consciousness. <i>PLoS Computational Biology</i> , 2013, 9, e1003271.	3.2	124
48	Cerebral processing of auditory and noxious stimuli in severely brain injured patients: Differences between VS and MCS. <i>Neuropsychological Rehabilitation</i> , 2005, 15, 283-289.	1.6	122
49	Metabolic activity in external and internal awareness networks in severely brain-damaged patients. <i>Journal of Rehabilitation Medicine</i> , 2012, 44, 487-494.	1.1	119
50	Tracking the recovery of consciousness from coma. <i>Journal of Clinical Investigation</i> , 2006, 116, 1823-1825.	8.2	118
51	Detecting consciousness in a total locked-in syndrome: An active event-related paradigm. <i>Neurocase</i> , 2009, 15, 271-277.	0.6	117
52	Quantifying Cortical EEG Responses to TMS in (Un)consciousness. <i>Clinical EEG and Neuroscience</i> , 2014, 45, 40-49.	1.7	116
53	Using Functional Magnetic Resonance Imaging to Detect Covert Awareness in the Vegetative State. <i>Archives of Neurology</i> , 2007, 64, 1098.	4.5	114
54	Thalamus, Brainstem and Salience Network Connectivity Changes During Propofol-Induced Sedation and Unconsciousness. <i>Brain Connectivity</i> , 2013, 3, 273-285.	1.7	112

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55	Interaction between Hippocampal and Striatal Systems Predicts Subsequent Consolidation of Motor Sequence Memory. PLoS ONE, 2013, 8, e59490.	2.5	105
56	What is it like to be vegetative or minimally conscious?. Current Opinion in Neurology, 2007, 20, 609-613.	3.6	98
57	Does the FOUR score correctly diagnose the vegetative and minimally conscious states?. Annals of Neurology, 2006, 60, 744-745.	5.3	97
58	Neuroimaging activation studies in the vegetative state: predictors of recovery?. Clinical Medicine, 2008, 8, 502-507.	1.9	97
59	Consciousness Regained: Disentangling Mechanisms, Brain Systems, and Behavioral Responses. Journal of Neuroscience, 2017, 37, 10882-10893.	3.6	92
60	Reversal of cortical information flow during visual imagery as compared to visual perception. NeuroImage, 2014, 100, 237-243.	4.2	90
61	Residual cognitive function in comatose, vegetative and minimally conscious states. Current Opinion in Neurology, 2005, 18, 726-733.	3.6	88
62	On the Cerebral Origin of EEG Responses to TMS: Insights From Severe Cortical Lesions. Brain Stimulation, 2015, 8, 142-149.	1.6	87
63	The changing spectrum of coma. Nature Clinical Practice Neurology, 2008, 4, 544-546.	2.5	86
64	Brain Connectivity in Disorders of Consciousness. Brain Connectivity, 2012, 2, 1-10.	1.7	85
65	Relevance vector machine-consciousness classifier applied to cerebral metabolism of vegetative and locked-in patients. NeuroImage, 2011, 56, 797-808.	4.2	84
66	Perturbation of whole-brain dynamics in silico reveals mechanistic differences between brain states. NeuroImage, 2018, 169, 46-56.	4.2	83
67	Propofol anesthesia reduces Lempel-Ziv complexity of spontaneous brain activity in rats. Neuroscience Letters, 2016, 628, 132-135.	2.1	78
68	Altered sleep homeostasis correlates with cognitive impairment in patients with focal epilepsy. Brain, 2017, 140, 1026-1040.	7.6	78
69	Visual fixation in the vegetative state: an observational case series PET study. BMC Neurology, 2010, 10, 35.	1.8	75
70	Brain Connectivity in Pathological and Pharmacological Coma. Frontiers in Systems Neuroscience, 2010, 4, 160.	2.5	69
71	Stimulus Set Meaningfulness and Neurophysiological Differentiation: A Functional Magnetic Resonance Imaging Study. PLoS ONE, 2015, 10, e0125337.	2.5	69
72	Neural correlates of performance variability during motor sequence acquisition. NeuroImage, 2012, 60, 324-331.	4.2	68

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73	Consciousness and cerebral baseline activity fluctuations. <i>Human Brain Mapping</i> , 2008, 29, 868-874.	3.6	67
74	A fast and general method to empirically estimate the complexity of brain responses to transcranial and intracranial stimulations. <i>Brain Stimulation</i> , 2019, 12, 1280-1289.	1.6	64
75	Connectivity differences between consciousness and unconsciousness in non-rapid eye movement sleep: a TMS-EEG study. <i>Scientific Reports</i> , 2019, 9, 5175.	3.3	64
76	Brain function in the vegetative state. <i>Acta Neurologica Belgica</i> , 2002, 102, 177-85.	1.1	56
77	Neuroimaging after coma. <i>Neuroradiology</i> , 2010, 52, 15-24.	2.2	54
78	Changes in Whole Brain Dynamics and Connectivity Patterns during Sevoflurane- and Propofol-induced Unconsciousness Identified by Functional Magnetic Resonance Imaging. <i>Anesthesiology</i> , 2019, 130, 898-911.	2.5	54
79	Posterior and anterior cortex "where is the difference that makes the difference?". <i>Nature Reviews Neuroscience</i> , 2016, 17, 666-666.	10.2	51
80	Consciousness and cortical responsiveness: a within-state study during non-rapid eye movement sleep. <i>Scientific Reports</i> , 2016, 6, 30932.	3.3	51
81	Propofol-Induced Frontal Cortex Disconnection: A Study of Resting-State Networks, Total Brain Connectivity, and Mean BOLD Signal Oscillation Frequencies. <i>Brain Connectivity</i> , 2016, 6, 225-237.	1.7	49
82	Reduction in Inter-Hemispheric Connectivity in Disorders of Consciousness. <i>PLoS ONE</i> , 2012, 7, e37238.	2.5	48
83	Magnetic resonance spectroscopy and diffusion tensor imaging in coma survivors: promises and pitfalls. <i>Progress in Brain Research</i> , 2009, 177, 215-229.	1.4	47
84	Preserved Covert Cognition in Noncommunicative Patients With Severe Brain Injury?. <i>Neurorehabilitation and Neural Repair</i> , 2015, 29, 308-317.	2.9	46
85	Reaching across the abyss: recent advances in functional magnetic resonance imaging and their potential relevance to disorders of consciousness. <i>Progress in Brain Research</i> , 2009, 177, 261-274.	1.4	45
86	Does Sleep Promote False Memories?. <i>Journal of Cognitive Neuroscience</i> , 2011, 23, 26-40.	2.3	45
87	Response to Comment on "Preserved Feedforward But Impaired Top-Down Processes in the Vegetative State". <i>Science</i> , 2011, 334, 1203-1203.	12.6	45
88	Theoretical approaches to the diagnosis of altered states of consciousness. <i>Progress in Brain Research</i> , 2009, 177, 383-398.	1.4	44
89	Neural Precursors of Delayed Insight. <i>Journal of Cognitive Neuroscience</i> , 2011, 23, 1900-1910.	2.3	44
90	The Phenomenal Contents and Neural Correlates of Spontaneous Thoughts across Wakefulness, NREM Sleep, and REM Sleep. <i>Journal of Cognitive Neuroscience</i> , 2017, 29, 1766-1777.	2.3	43

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91	Is there anybody in there? Detecting awareness in disorders of consciousness. Expert Review of Neurotherapeutics, 2008, 8, 1719-1730.	2.8	42
92	Brain Function in Physiologically, Pharmacologically, and Pathologically Altered States of Consciousness. International Anesthesiology Clinics, 2008, 46, 131-146.	0.8	41
93	Influence of anesthesia on cerebral blood flow, cerebral metabolic rate, and brain functional connectivity. Current Opinion in Anaesthesiology, 2011, 24, 474-479.	2.0	41
94	Global structural integrity and effective connectivity in patients with disorders of consciousness. Brain Stimulation, 2018, 11, 358-365.	1.6	39
95	Measuring the fading consciousness in the human brain. Current Opinion in Neurology, 2011, 24, 394-400.	3.6	38
96	Mechanisms Underlying Disorders of Consciousness: Bridging Gaps to Move Toward an Integrated Translational Science. Neurocritical Care, 2021, 35, 37-54.	2.4	38
97	Nociception Coma Scale—Revised Scores Correlate With Metabolism in the Anterior Cingulate Cortex. Neurorehabilitation and Neural Repair, 2014, 28, 149-152.	2.9	36
98	Functional split brain in a driving/listening paradigm. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 14444-14449.	7.1	35
99	Festina Lente: Evidences for Fast and Slow Learning Processes and a Role for Sleep in Human Motor Skill Learning. Learning and Memory, 2003, 10, 237-239.	1.3	33
100	Directed Information Transfer in Scalp Electroencephalographic Recordings. Clinical EEG and Neuroscience, 2014, 45, 33-39.	1.7	32
101	Consciousness and responsiveness. Current Opinion in Anaesthesiology, 2013, 26, 444-449.	2.0	31
102	The Neurology of Consciousness. , 2016, , 407-461.		29
103	Human Rapid Eye Movement Sleep Shows Local Increases in Low-Frequency Oscillations and Global Decreases in High-Frequency Oscillations Compared to Resting Wakefulness. ENeuro, 2018, 5, ENEURO.0293-18.2018.	1.9	29
104	Quantifying arousal and awareness in altered states of consciousness using interpretable deep learning. Nature Communications, 2022, 13, 1064.	12.8	29
105	Evoked Alpha Power is Reduced in Disconnected Consciousness During Sleep and Anesthesia. Scientific Reports, 2018, 8, 16664.	3.3	28
106	Changes in Effective Connectivity by Propofol Sedation. PLoS ONE, 2013, 8, e71370.	2.5	28
107	Extended Multiple-Field High-Definition transcranial direct current stimulation (HD-tDCS) is well tolerated and safe in healthy adults. Restorative Neurology and Neuroscience, 2017, 35, 631-642.	0.7	25
108	Naloxone-insensitive Epidural Placebo Analgesia in a Chronic Pain Patient. Anesthesiology, 2007, 106, 1239-1242.	2.5	23

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109	Consciousness and the fallacy of misplaced objectivity. <i>Neuroscience of Consciousness</i> , 2021, 2021, niab032.	2.6	22
110	Sleep and Consciousness. , 2013, , 133-182.		21
111	A high-density electroencephalography study reveals abnormal sleep homeostasis in patients with rapid eye movement sleep behavior disorder. <i>Scientific Reports</i> , 2021, 11, 4758.	3.3	20
112	Regional and global resting-state functional MR connectivity in temporal lobe epilepsy: Results from the Epilepsy Connectome Project. <i>Epilepsy and Behavior</i> , 2021, 117, 107841.	1.7	19
113	Neurophysiological correlates of hypnotic analgesia. <i>Contemporary Hypnosis</i> , 2009, 26, 15-23.	0.7	14
114	Increased lucid dream frequency in long-term meditators but not following mindfulness-based stress reduction training.. <i>Psychology of Consciousness: Theory Research, and Practice</i> , 2019, 6, 40-54.	0.4	11
115	Monitoring epilepsy in the intensive care unit: Current state of facts and potential interest of high density EEG. <i>Brain Injury</i> , 2014, 28, 1151-1155.	1.2	10
116	Functional Neuroimaging. , 2009, , 31-42.		10
117	Common Data Elements for COVID-19 Neuroimaging: A GCS-NeuroCOVID Proposal. <i>Neurocritical Care</i> , 2021, 34, 365-370.	2.4	9
118	Functional "unlocking": bedside detection of covert awareness after severe brain damage. <i>Brain</i> , 2018, 141, 1239-1241.	7.6	7
119	Exploring the Neurophysiological Correlates of Loss and Recovery of Consciousness: Perturbational Complexity. , 2016, , 93-104.		5
120	Functional Neuroimaging Approaches to the Changing Borders of Consciousness. <i>Journal of Psychophysiology</i> , 2010, 24, 68-75.	0.7	5
121	Episodic thought distinguishes spontaneous cognition in waking from REM and NREM sleep. <i>Consciousness and Cognition</i> , 2022, 97, 103247.	1.5	5
122	Functional Imaging and Impaired Consciousness. , 2012, , 25-34.		4
123	IIT, half masked and half disfigured. <i>Behavioral and Brain Sciences</i> , 2022, 45, e60.	0.7	3
124	Engineering nonlinear epileptic biomarkers using deep learning and Benford's law. <i>Scientific Reports</i> , 2022, 12, 5397.	3.3	3
125	Graph Theoretical Analysis of Cortical Networks based on Conscious Experience. , 2019, 2019, 3373-3376.		2
126	Functional Neuroimaging Techniques. , 2016, , 31-47.		1



#	ARTICLE	IF	CITATIONS
127	Causal Connectivity According to Conscious Experience in Non-Rapid Eye Movement Sleep. , 2019, , .		1
128	Local Sleep Slow-Wave Activity Colocalizes With the Ictal Symptomatogenic Zone in a Patient With Reflex Epilepsy: A High-Density EEG Study. <i>Frontiers in Systems Neuroscience</i> , 2020, 14, 549309.	2.5	1
129	Off-line processing of memory traces during human sleep: Contribution of functional neuroimaging. <i>Sleep and Biological Rhythms</i> , 2003, 1, 75-83.	1.0	0
130	Using Transcranial Magnetic Stimulation to Measure Cerebral Connectivity in Patients with Disorders of Consciousness. , 2012, , 79-84.		0
131	Characterizing brain states with Granger causality. <i>BMC Neuroscience</i> , 2013, 14, .	1.9	0
132	Neuroimaging of Consciousness in the Vegetative and Minimally Conscious States. , 2013, , 117-131.		0