

List of publications

Dr. Philip J. Broser

March 2, 2021

1 In press or published preprint

1. P. J. Broser, J. Marquetand, T. Middelmann, D. Sometti, and C. Braun. Investigation of the temporal and spatial dynamics of muscular action potentials through optically pumped magnetometers . *bioRxiv*, DOI: 10.1101/2021.02.24.432771, 2021
2. Marquetand J., T. Middelmann, D. Sometti, C. Braun, and P. J. Broser. Nicht-invasive magnetomyographie mittels optisch gepumpter magnetometer (opm) - charakteristika des muskelaktionspotentials. *Klinische Neurophysiologie*, in review (submitted 02/2021)

2 Peer reviewed published research

2.1 First or Last Author

1. P. J. Broser, T. Middelmann, D. Sometti, and C. Braun. Optically pumped magnetometers disclose magnetic field components of the muscular action potential. *J Electromyogr Kinesiol*, 56:102490, Feb 2021(1.740) ¹
2. C. Jenny, J. Luetschg, and P. J. Broser. Change in cross-sectional area of the median nerve with age in neonates, infants and children analyzed by high-resolution ultrasound imaging. *European Journal of Paediatric Neurology*, 2020 (2.496)
3. P. J. Broser and J. Luetschg. Die Bedeutung neurophysiologischer Methoden in der Abklaerung neuropaediatrischer und neuromuskulaerer Erkrankungen. *Monatsschrift Kinderheilkunde*, 2019 (0.353)
4. P. J. Broser and J. Luetschg. Elektroneurografische und elektromyografische Diagnostik in der Neuropaediatric. *Klinische Neurophysiologie*, 2019 (0.325)

¹Impactfactor, Science Citation Index

5. P. J. Broser, S. Knappe, D. S. Kajal, N. Noury, O. Alem, V. Shah, and C. Braun. Optically Pumped Magnetometers for Magneto-Myography to Study the Innervation of the Hand. *IEEE Trans Neural Syst Rehabil Eng*, 26(11):2226–2230, Nov 2018 (3.410)
6. D. Zieglgaensberger and P. Broser. Epilepsie-Behandlung - Grundsätze der medikamentösen Therapie. *InFo Neurologie u. Psychiatrie*, 33:95–101, 2018
7. Philip Broser and Oliver Maier. Frühe infantile epileptische Enzephalopathien. *Epileptologie*, 33:95–101, 2016
8. Philip J Broser, Veronika Moor, and Christoph Braun. A non-magnetic rotating disk stimulator for the study of neuromagnetic correlates of sensorimotor interaction. *IEEE Transactions on Neural Systems and Rehabilitation Engineering*, 23(6):1078–1084, 2015 (3.410)
9. Melanie Ginger, Philip Broser, and Andreas Frick. Three-dimensional tracking and analysis of ion channel signals across dendritic arbors. *Frontiers in neural circuits*, 7, 2013 (3.005)
10. Philip J Broser and Christoph Braun. Hydraulic driven fast and precise nonmagnetic tactile stimulator for neurophysiological and meg measurements. *IEEE Transactions on Biomedical Engineering*, 59(10):2852–2858, 2012(3.577)
11. Philip Julian Broser, Samuel Groeschel, Till-Karsten Hauser, Karen Lidzba, and Marko Wilke. Functional mri-guided probabilistic tractography of cortico-cortical and cortico-subcortical language networks in children. *NeuroImage*, 63(3):1561–1570, 2012(5.835)
12. Philip Broser, Faraneh Vargha-Khadem, and Chris A Clark. Robust subdivision of the thalamus in children based on probability distribution functions calculated from probabilistic tractography. *Neuroimage*, 57(2):403–415, 2011(5.835)
13. Philip J Broser, Sezgin Erdogan, Valery Grinevich, Pavel Osten, Bert Sakmann, and Damian J Wallace. Automated axon length quantification for populations of labelled neurons. *Journal of neuroscience methods*, 169(1):43–54, 2008(2.554)
14. Marcel Oberlaender, Randy M Bruno, Bert Sakmann, and Philip J Broser. Transmitted light brightfield mosaic microscopy for three-dimensional tracing of single neuron morphology. *Journal of biomedical optics*, 12(6):064029–064029, 2007(2.530)
15. P Broser, Valery Grinevich, Pavel Osten, Bert Sakmann, and DJ Wallace. Critical period plasticity of axonal arbors of layer 2/3 pyramidal neurons in rat somatosensory cortex: layer-specific reduction of projections into deprived cortical columns. *Cerebral Cortex*, 18(7):1588–1603, 2007(6.559)

16. Philip J Broser, Roland Schulte, Stefan Lang, A Roth Fritjof, Helmchen Waters, Bert Sakmann, G Wittum, et al. Nonlinear anisotropic diffusion filtering of three-dimensional image data from two-photon microscopy. *Journal of biomedical optics*, 9(6):1253–1264, 2004(2.530)

2.2 Other Position

1. Jan Henje Döring, Afshin Saffari, Thomas Bast, Knut Brockmann, Laura Ehrhardt, Walid Fazeli, Wibke G. Janzarik, Gerhard Kluger, Hiltrud Muhle, Rikke S. Møller, Konrad Platzter, Joana Larupa Santos, Iben Bache, Astrid Bertsche, Michaela Bonfert, Ingo Borggräfe, Philip J. Broser, Alexandre N. Datta, Trine Bjørg Hammer, Hans Hartmann, Anette Hasse-Wittmer, Marco Henneke, Hermann Kühne, Johannes R. Lemke, Oliver Maier, Eva Matzker, Andreas Merckenschlager, Joachim Opp, Steffi Patzer, Kevin Rostasy, Birgit Stark, Adam Strzelczyk, Celina von Stülpnagel, Yvonne Weber, Markus Wolff, Birgit Zirn, Georg Friedrich Hoffmann, Stefan Kölker, and Steffen Syrbe. The phenotypic spectrum of prrt2-associated paroxysmal neurologic disorders in childhood. *Biomedicines*, 8(11), 2020
2. S. C. Disse, S. P. Toelle, S. Schroeder, M. Theiler, L. Weibel, P. Broser, C. Langner, D. Siegel, K. Brockmann, I. Schoenfelder, and S. Meyer. Epidemiology, Clinical Features, and Use of Early Supportive Measures in PHACE Syndrome: A European Multinational Observational Study. *Neuroepidemiology*, pages 1–9, Jul 2020
3. J. Heckmann, M. Todorova, S. Mueller, P. J. Broser, and V. Sturm. First Clinical Experience with Anti-myelin Oligodendrocyte Glycoprotein Antibody-Positive Optic Neuritis. *Klin Monbl Augenheilkd*, Feb 2020(0.792)
4. Verena C Wimmer, Philip J Broser, Thomas Kuner, and Randy M Bruno. Experience-induced plasticity of thalamocortical axons in both juveniles and adults. *Journal of Comparative Neurology*, 518(22):4629–4648, 2010(3.266)
5. M Oberlaender, PJ Broser, B Sakmann, and S Hippler. Shack-hartmann wave front measurements in cortical tissue for deconvolution of large three-dimensional mosaic transmitted light brightfield micrographs. *Journal of microscopy*, 233(2):275–289, 2009(1.692)

2.3 Conference Abstracts

1. P. J. Broser. Optical pumped magnetometer for magnetomyography to study the nerval innervation pattern of the hand. In *DGKN 2019*. Deutsche Gesellschaft fuer klinische Neurophysiologie, 2019
2. P. J. Broser. Elektroneuromyographie zur differtialdiagnose von neuromuskulaeren erkrankungen im kindesalter. In *DGKN 2019*. Deutsche Gesellschaft fuer klinische Neurophysiologie, 2019

3. P.J. Broser, O. Maier, O. Hasselmann, and J. Luetsch. Electrophysiological diagnostic of neuromuscular diseases in new-borns, infants and toddlers. In *Neurowoche 2018 - Abstracts*, volume 1, page 593. Deutsche Gesellschaft fuer Neurologie, 2018
4. D. Lekaditi and P Broser. Comparison of the early auditory evoked potentials during the first months of life in term and preterm children. In *Neurowoche 2018 - Abstracts*, volume 1, page 623. Deutsche Gesellschaft fuer Neurologie, 2018
5. P. J. Broser, S. Knappe, D. S. Kajal, N. Noury, O. Alem, V. Shah, and C. Braun. Optical pumped magnetometer for magnetomyography to study the nerval innervation pattern of the hand. In *Neurowoche 2018 - Abstracts*, volume 1, page 736. Deutsche Gesellschaft fuer Neurologie, 2018
6. Philip J Broser and Oliver Maier. Clinical neurophysiology in child neurology—usefulness in the diagnostic process and guidance of therapy. *European Journal of Paediatric Neurology*, 21:e200, 2017 (2.013)
7. P Broser and O Maier. Ep 139. cortical maturation during the first years of life as assessed by steady state flicker vep. *Clinical Neurophysiology*, 127(9):e299–e300, 2016 (3.866)
8. P Broser, R Beschrone, M Ginger, S Rona, M Schuhmann, and J Honegger. V26. three dimensional tracking of ion channels on epileptogenic cortical neurons in focal dysplasia in humans. *Clinical Neurophysiology*, 126(8):e79, 2015 (3.866)
9. P Broser and C Braun. Development of a meg compatible method to study the interaction of the sensory and motor cortex in humans. *Klinische Neurophysiologie*, 45(01):P56, 2014
10. P Broser, S Groeschel, T Hauser, K Lidzba, and M Wilke. Pp8. 2–1914 functional mri-guided probabilistic tractography of cortico-cortical and cortico-subcortical language networks in children. *European Journal of Paediatric Neurology*, 17:S51, 2013 (2.013)
11. P Broser, S Gröschel, K Lidzba, T Hauser, and M Wilke. Lateralization of language pathways in children as assessed using fmri-guided probabilistic tractography. *Neuropediatrics*, 43(02):FV12.08, 2012 (1.571)
12. Marcel Oberlaender, Vincent J Dercksen, Philip J Broser, Randy M Bruno, and Bert Sakmann. Neuromorph and neurocount: Automated tools for fast and objective acquisition of neuronal morphology for quantitative structural analysis. In *Front. Neuroinform. Conference Abstract: Neuroinformatics*, 2008 (3.870)
13. PJ Broser, R Schulte, A Roth, F Helmehen, J Waters, S Lang, B Sakmann, and G Wittum. Nonlinear anisotropic diffusion filtering of three-dimensional image data from 2-photon microscopy. *Image Processing: Algorithms and Systems IV*, 5672:44–69, 2005

3 Monographs

3.1 PhD and Masterthesis

1. Philip Julian Broser. Axonal arbor plasticity of the developing neocortex. 2007
2. Philip Julian Broser. *Morphologische Bildoperatoren für die quantitative Neurobiologie*. PhD thesis, 2006
3. Philip Julian Broser. *Simulation von Strömungen in Blutgefäßen*. PhD thesis, Ruprecht- Karls- Universität Heidelberg Heidelberg, 2002

3.2 Other

1. P. J. Broser. Case report. In Manuel Stier and Christine Maier, editors, *Seltene Krankheiten*, pages 108–109. Foerderverein fuer Kinder mit seltenen Krankheiten, User, Ch, 2018
2. Philip Broser, Alexander Heusel, Daniel Jungblut, Gillian Queisser, Sebastian Reiter, Roland Schulte, Christine Voßen, and Gabriel Wittum. A2. 1, m8, t6: Neura: The neuron reconstruction algorithm. *G-CSC Report 2010*, page 19, 2010
3. Philip J Broser and Marcel Oberländer. Reconstruction and visualization of neuronal cell structures with bright-field mosaic microscopy, November 22 2006. US Patent App. 12/513,424
4. Philip Broser, Lain Mencia, and Christian Lozanoski. Der kleinste kopierer der welt - die polymerase chain reaction (pcr). *junge wissenschaft*, 13(49):40–42, 1998