



 timonemken.com ORCID iD
0000-0002-4251-2229 inSPIRE-HEP
T.Emken.1 Google Scholar
Timon Emken

Citation statistics can be found on inSPIRE-HEP.

Please note the convention in high-energy physics to list authors in alphabetical order.

PUBLICATION LIST

- [19] *Direct searches for general dark matter-electron interactions with graphene detectors: Part II. Sensitivity studies*
R. Catena, **Timon Emken**, M. Matas, N. Spaldin, E. Urdshals
Submitted to Physical Review Research (PRR). [[arXiv:2303.15509](#)]
- [18] *Direct searches for general dark matter-electron interactions with graphene detectors: Part I. Electronic structure calculations*
R. Catena, **Timon Emken**, M. Matas, N. Spaldin, E. Urdshals
Submitted to Physical Review Research (PRR). [[arXiv:2303.15497](#)]
- [17] *Dark matter - electron interactions in materials beyond the dark photon model*
R. Catena, D. Cole, **Timon Emken**, M. Matas, N. Spaldin, W. Tarantino, E. Urdshals
Journal for Cosmology and Astroparticle Physics 03 (2023) 052.
[[arXiv:2210.07305](#)]
- [16] *A Next-Generation Liquid Xenon Observatory for Dark Matter and Neutrino Physics*
J. Aalbers et al. (incl. **Timon Emken**)
Journal of Physics G: Nuclear & Particle Physics 50 013001, 2023.
[[arXiv:2203.02309](#)]
- [15] *Skipper CCDs for the search of a daily modulation of Dark Matter signal in the DM-SQUARE experiment (TAUP2021 Conference proceedings)*
N. Ávalos, H. Arnaldi, I. Artola, X. Bertou, E. Estrada, M. Gómez Berisso, M. B. Lovino, M. Mantiñan, M. Sofo Haro, J. Tiffenberg, J. Estrada, T.-T. Yu, R. Essig, **Timon Emken**
Journal of Physics: Conference Series, 2156 (2021), 012074.
- [14] *Electron recoils from terrestrial upscattering of inelastic dark matter*
Timon Emken, Jonas Frerick, Saniya Heeba, Felix Kahlhoefer
Physical Review D, 105(05):055023, 2022. [[arXiv:2112.06930](#)]
- [13] *obscura: A modular C++ tool and library for the direct detection of (sub-GeV) dark matter via nuclear and electron recoils*
Timon Emken
Journal of Open Source Software, 6(68), 3725, 2021. [[arXiv:2112.01489](#)]
- [12] *Crystal responses to general dark matter-electron interactions*
Riccardo Catena, **Timon Emken**, Marek Matas, Nicola A. Spaldin, Einar Urdshals
Physical Review Research, 3(3):033149, 2021. [[arXiv:2105.02233](#)]
- [11] *Solar reflection of light dark matter with heavy mediators*
Timon Emken
Physical Review D, 105(06):063020, 2022. [[arXiv:2102.12483](#)]
- [10] *Measuring the local Dark Matter density in the laboratory*
Bradley J. Kavanagh, **Timon Emken**, Riccardo Catena
Physical Review D, 104(08):083023, 2021. [[arXiv:2004.01621](#)]
- [9] *Rejecting the Majorana nature of dark matter with electron scattering experiments*
Riccardo Catena, **Timon Emken**, Julia Ravanis
Journal for Cosmology and Astroparticle Physics., 2020(06):056, 2020.
[[arXiv:2003.04039](#)]
- [8] *Projected sensitivity to sub-GeV dark matter of next-generation semiconductor detectors*
Erik Andersson, Alex Bökmark, Riccardo Catena, **Timon Emken**, Henrik Klein Moberg, Emil Åstrand.
Journal for Cosmology and Astroparticle Physics, 2020(05):036, 2020.
[[arXiv:2001.08910](#)]

- [7] *Atomic responses to general dark matter- electron interactions*
Riccardo Catena, **Timon Emken**, Nicola Spaldin, Walter Tarantino
Physical Review Research, 2:033195, 2020. [[arXiv:1912.08204](#)]
- [6] *Direct Detection of Strongly Interacting Sub-GeV Dark Matter via Electron Recoils*
Timon Emken, Rouven Essig, Chris Kouvaris, Mukul Sholapurkar
Journal for Cosmology and Astroparticle Physics, 1909(09):070, 2019.
[[arXiv:1905.06348](#)]
- [5] *How blind are underground and surface detectors to strongly interacting Dark Matter?*
Timon Emken, Chris Kouvaris
Physical Review D, 97(11):115047, 2018. [[arXiv:1802.04764](#)]
- [4] *The Sun as a sub-GeV Dark Matter Accelerator*
Timon Emken, Chris Kouvaris, Niklas Grønlund Nielsen
Physical Review D, 97(6):063007, 2018. [[arXiv:1709.06573](#)]
- [3] *DaMaSCUS: The Impact of Underground Scatterings on Direct Detection of Light Dark Matter*
Timon Emken, Chris Kouvaris
Journal for Cosmology and Astroparticle Physics, 1710(10):031, 2017.
[[arXiv:1706.02249](#)]
- [2] *Terrestrial effects on dark matter-electron scattering experiments*
Timon Emken, Chris Kouvaris, Ian M. Shoemaker
Physical Review D, 96(1):015018, 2017. [[arXiv:1702.07750](#)]
- [1] *Model independent limits on an ultralight gravitino from supernovae*
Riccardo Catena, Laura Covi, **Timon Emken**
Physical Review D, 91:123524, 2015. [[arXiv:1410.0314](#)]