

## Experimental determination of the interaction potential between a helium atom and the interior surface of a C60 fullerene molecule

Bacanu, George Razvan; Jafari, Tanzeeha; Aouane, Mohamed; Rantaharju, Jyrki; Walkey, Mark; Hoffman, Gabriela; Shugai, Anna; Nagel, Urmas; Jimenez-Ruiz, Monica; Horsewill, Anthony J.; Rols, Stephane; Rõõm, Toomas; Whitby, Richard J.; Levitt, Malcolm H. The Journal of chemical physics 2021 / art. 144302 <https://doi.org/10.1063/5.0066817>

## Experimental observation of quantum many-body excitations of E8 symmetry in the Ising chain ferromagnet CoNb2O6

Amelin, Kirill; Engelmayer, Johannes; Viirok, Johan; Nagel, Urmas; Rõõm, Toomas; Lorenz, Thomas; Wang, Zhe Physical review B 2020 / art. 104431, 5 p. : ill <https://doi.org/10.1103/PhysRevB.102.104431>

## In situ electric-field control of THz nonreciprocal directional dichroism in the multiferroic Ba2CoGe2O7

Vit, J.; Viirok, Johan; Peedu, Laur; Rõõm, Toomas; Nagel, Urmas; Kocsis, V.; Tokunaga, Y.; Taguchi, Y.; Tokura, Y.; Kezsmarki, I.; Balla, P.; Penc, K.; Romhányi, J.; Bordacs, S. Physical review letters 2021 / art. 157201, 6 p. : ill <https://doi.org/10.1103/PhysRevLett.127.157201>

## Ne, Ar, and Kr oscillators in the molecular cavity of fullerene C60

Jafari, Tanzeeha; Shugai, Anna; Nagel, Urmas; Bacanu, George Razvan; Aouane, Mohamed; Jimenez-Ruiz, Monica; Rols, Stephane; Bloodworth, Sally; Walkey, Mark; Hoffman, Gabriela; Whitby, Richard J.; Levitt, Malcolm H.; Rõõm, Toomas The Journal of chemical physics 2023 / art. 234305 : ill <https://doi.org/10.1063/5.0152628>

## Observation of E8 articles in an Ising chain antiferromagnet

Zhang, Zao; Amelin, Kirill; Wang, Xiao; Zou, Haiyuan; Yang, Jiahao; Nagel, Urmas; Rõõm, Toomas; Dey, Tusharkanti; Nugroho, Agustinus Agung; Lorenz, Thomas; Wu, Jianda; Wang, Zhe Physical review B 2020 / art. 220411, 6 p. : ill <https://doi.org/10.1103/PhysRevB.101.220411>

## Quantum dynamics of noble gas atoms and methane in the molecular cavity of fullerene : terahertz spectroscopy study = Väärisgaasi aatomite ja metaani kvantdünaamika fullereeni molekulaarses õõnsuses : terahertsspektroskoopia uurimus

Jafari, Tanzeeha 2025 <https://digikogu.taltech.ee/et/Item/33879cfc-2e32-4b05-bdbc-86e033784086> <https://doi.org/10.23658/taltech.6/2025> [https://www.ester.ee/record=b5728363\\*est](https://www.ester.ee/record=b5728363*est)

## The spectroscopy of the quantum criticality in a transverse field Ising chain compound CoNb2O6 [Online resource]

Viirok, Johan; Huvonen, Dan; Rõõm, Toomas; Nagel, Urmas Tartu Ülikooli ASTRA projekt PER ASPERA : Funktsionaalsed materjalid ja tehnoloogiad : [4.-5. veebr. 2019, Tartu : teesid] 2019 / 1 p <http://fntdk.ut.ee/teesid-2019/>

## Spin excitations of magnetoelectric LiNiPO4 in multiple magnetic phases

Peedu, Laur; Kocsis, V.; Szaller, D.; Viirok, Johan; Nagel, Urmas; Rõõm, Toomas; Farkas, D.G.; Bordacs, S.; Kamenskyi, D.L.; Zeitler, U.; Tokunaga, Y.; Taguchi, Y.; Tokura, Y.; Kezsmarki, I. Physical review B 2019 / art. 024406, 8 p. : ill <https://doi.org/10.1103/PhysRevB.100.024406>

## Spin-waves in magnetoelectric materials with strong single-ion anisotropy = Spinn-lained tugeva anisotroopiaga magnetelektrilistes materjalides

Peedu, Laur 2022 <https://doi.org/10.23658/taltech.69/2022> <https://digikogu.taltech.ee/et/Item/b0fe0699-1bc6-407d-bcbe-2d0600f4ddd4> [https://www.ester.ee/record=b5527933\\*est](https://www.ester.ee/record=b5527933*est)

## Squeezing formaldehyde into C60 fullerene

Vyas, Vijyesh K.; Bacanu, George Razvan; Soundararajan, Murari; Marsden, Elizabeth S.; Jafari, Tanzeeha; Shugai, Anna; Light, Mark E.; Nagel, Urmas; Rõõm, Toomas; Levitt, Malcolm H.; Whitby, Richard J. Nature Communications 2024 / art. 2515 <https://doi.org/10.1038/s41467-024-46886-5> [Journal metrics at Scopus](#) [Article at Scopus](#) [Journal metrics at WOS](#) [Article at WOS](#)

## Symmetry breaking revealed by THz spectroscopy of magnetic excitations = Sümmeetriarikkumiste avaldumine magnetergastuste teraherts-spektrites

Amelin, Kirill 2022 <https://doi.org/10.23658/taltech.47/2022> <https://digikogu.taltech.ee/et/Item/15f23ccb-625a-455f-8592-b61b2da787d1> [https://www.ester.ee/record=b5511839\\*est](https://www.ester.ee/record=b5511839*est)

## Terahertz absorption spectroscopy study of spin waves in orthoferrite YFeO3 in a magnetic field

Amelin, Kirill; Nagel, Urmas; Fishman, R.S.; Yoshida, Y.; Sim, Hasung; Park, Kisoo; Park, Je-Geun; Rõõm, Toomas Physical review B 2018 / art. 174417, 6 p. : ill <https://doi.org/10.1103/PhysRevB.98.174417>

## Terahertz magneto-optical investigation of quadrupolar spin-lattice effects in magnetically frustrated Tb2Ti2O7

Amelin, Kirill; Alexanian, Y.; Nagel, Urmas; Rõõm, Toomas; Robert, J.; Debray, J.; Simonet, V.; Decorse, C.; Wang, Z.; Ballou, R.; Constable, E.; de Brion, Sophie Physical review B 2020 / art. 134428, 11 p. : ill <https://doi.org/10.1103/PhysRevB.102.134428>

## Terahertz spectroscopy of low-dimensional spin systems = Madalamõõduliste spinnsüsteemide terahertsspektroskoopia

Huvonen, Dan 2008 [https://www.ester.ee/record=b2375139\\*est](https://www.ester.ee/record=b2375139*est)

## Terahertz spectroscopy of spin excitations in magnetoelectric LiFePO4 in high magnetic fields

**Peedu, Laur**; Kocsis, V.; Szaller, D.; Forrai, B.; Bordacs, S.; Kezsmarki, I.; Viirok, Johan; Nagel, Urmas; Bernath, B.; Kamenskyi, D.L.; Miyata, A.; Portugall, O.; Tokunaga, Y.; Tokura, Y.; Taguchi, Y.; Rõõm, Toomas Physical review B 2022 / art. 134413, 12 p. : ill <https://doi.org/10.1103/PhysRevB.106.134413>

**Terahertz spectroscopy of the helium endofullerene He@C60**

Jafari, Tanzeeha; Bacanu, George Razvan; Shugai, Anna; Nagel, Urmas; Walkey, Mark; Hoffman, Gabriela; Levitt, Malcolm H.; Whitby, Richard J.; Rõõm, Toomas Physical chemistry chemical physics 2022 / p. 9943–9952 : ill <https://doi.org/10.1039/d2cp00515h>

**The study of magnetoelectric effect in multiferroics using THz spectroscopy = Magnetelektrilise nähtuse uurimine multiferroidides THz spektroskoopiaga**

**Viirok, Johan** 2020 <https://digikogu.taltech.ee/et/Item/6742e380-e1c5-4f1e-ae2a-8623a8261393>