

Referenz

Truppe, S., S. Marx, S. Kray, M. Doppelbauer, S. Hofsäss, H.C. Schewe, N. Walter, J. Pérez-Ríos, B.G. Sartakov and G. Meijer: Spectroscopic characterization of aluminum monofluoride with relevance to laser cooling and trapping. Physical Review A 100 (5), 052513 (2019).

Contributions:

ECAMP13

13th European Conference on Atoms, Molecules and Photons, Florence, Italy, 8-12.April 2019

Poster:

PARALLEL SESSION D2

Spectroscopic Characterization of Aluminium Monofluoride with Relevance to Laser Cooling and Trapping

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Towards Laser Cooling of Aluminium Monofluoride

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DPG in Rostock

Poster:

Spectroscopic characterization of the $a^3\Pi \leftarrow X^1\Sigma^+$ and $A^1\Pi \leftarrow a^3\Pi$ transitions of aluminium monofluoride

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Spectroscopic characterization of aluminium monofluoride with relevance to laser cooling and trapping

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Quantum Light and Matter : Towards Dipolar Physics with Ultracold Molecules - Durham University, 18-20 November 2019

Poster:

Spectroscopic characterization of aluminum monofluoride with relevance to laser cooling and trapping

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50th Annual Meeting of the APS Division of Atomic, Molecular and Optical Physics APS Meeting **May 27–31, 2019; Milwaukee, Wisconsin**

Poster:

	<u>L01.00166: Spectroscopy, buffer gas cooling and radiation pressure slowing of AlF molecules</u> Stefan Truppe, Silvio Marx, Sebastian Kray, Maximilian Doppelbauer, Simon Hofsaess, H. Christian Schewe, Boris Sartakov, Gerard Meijer
	<u>P06.00003: Towards laser cooling and trapping of aluminium monofluoride with high density</u> Stefan Truppe, Silvio Marx, Sebastian Kray, Maximilian Doppelbauer, Simon Hofsaess, H. Christian Schewe, Boris Sartakov, Gerard Meijer

inv. talk

Stefan Truppe

Truppe, S. (2018). *Laser Cooling Molecules to Below the Doppler Limit*. Talk presented at 2018 Conference on Cold and Controlled Molecules and Ions (CCMI). Athens, GA, USA. 2018-03.

No contribution of Boris Sartakov

Recherchen aus PuRe

Konferenzbeiträge der MP ab 2015

Singer, M., Hugenschmidt, C., Stenson, E. V., Hergenhahn, U., Horn-Stanja, J., Nissl, S., et al. (2019). APEX - Newly implemented functionalities towards the first magnetically confined electron-positron pair plasma. In F. Selim (Ed.), *AIP Conference Proceedings*. American Institute of Physics. doi:10.1063/1.5135828.

Titel The 18th International Conference on Positron Annihilation (ICPA-18)

Veranstaltungsort Orlando, FL, USA

Start-/Enddatum 2018-08-19 - 2018-08-24

Keine Beteiligung

Todd, A. M. M., Schöllkopf, W., Colson, W. B., Gewinner, S., Gottschalk, S. C., Helden, G. v., et al. (2019). The FHI FEL Upgrade Design. In *Proceedings of the 10th International Particle Accelerator Conference*. Geneva: JACoW. doi:10.18429/JACoW-IPAC2019-TUPRB103.

Titel 10th International Particle Accelerator Conference (IPAC2019)

Veranstaltungsort Melbourne, Australia

Start-/Enddatum 2019-05-19 - 2019-05-24

REFERENCES

- [1] H. P. Bluem et al., “The Fritz Haber Institute THz FEL Sta-tus,” Proc. FEL 2010 Conf., Malmo, Sweden, August (2010). <http://accelconf.web.cern.ch/AccelConf/FEL2010/papers/mopa09.pdf>
- [2] A. M. M. Todd et al., “Commissioning Status of the Fritz Ha-ber Institute THz FEL”, in Proc. 2nd Int. Particle Accelerator Conf. (IPAC'11), San Sebastian, Spain, Sep. 2011, paper THPC106, pp. 3137-3139
- [3] W. Schöllkopf et al., “First Lasing of the IR FEL at the Fritz-Haber-Institut Berlin,” Proc. FEL 2012 Conf., Nara, Japan, August (2012). <http://accelconf.web.cern.ch/AccelConf/FEL2012/papers/moob01.pdf>
- [4] W. Schöllkopf et al., “The new IR and THz FEL Facility at the Fritz Haber Institute in Berlin,” Advances in X-ray Free-Electron Lasers Instrumentation III, Sandra G. Biedron, Edi-tor, Proc. of SPIE Vol. 9512, 95121L (2015).
- [5] D. Arslanov, R. Jongma, L. van der Meer et al., “Scanning Problems of FLARE, a THz-FEL with a waveguide,” Proc. FEL 2014 Conf., Basel, Switzerland, August (2014). http://accelconf.web.cern.ch/AccelConf/FEL2014/posters/tup065_poster.pdf

Kießling, R., Gewinner, S., Paarmann, A., Schöllkopf, W., & Wolf, M. (2018). Synchronized Mid-Infrared Pulses at the Fritz Haber Institute IR-FEL. In K. Bishopberger, B. Carlsten, & V. R. W. Schaa (Eds.), *Proceedings of the 38th International Free-Electron Laser Conference* (pp. 188-191). Geneva: JACoW. doi:10.18429/JACoW-FEL2017-MOP059.

Titel 38th International Free-Electron Laser Conference (FEL2017)

Veranstaltungsort Santa Fe, NM, USA
Start-/Enddatum 2017-08-20 - 2017-08-25

REFERENCES

- [1] W. Schöllkopf et al., in Proc. SPIE 9512, 95121L (2015).
- [2] S. Zorzut et al., in Proc. FEL2015, paper MOP043, p.126(2015).
- [3] S. Schulz et al., Nat. Commun. 6, 5938 (2015).
- [4] G. M. H. Knippelset et al., Phys. Rev. Lett. 83, 1578 (1999).
- [5] D. A. Jaroszynski et al., Phys. Rev. Lett. 70, 3412 (1993).
- [6] D. A. Jaroszynski et al., Nucl. Instr. Meth. Phys. Res. A 331, 52 (1993).

Paßler, N., Razdolski, I., Gewinner, S., Schöllkopf, W., De Liberato, S., Gubbin, C., et al. (2018). Nonlinear Response and Strong Coupling of Surface Phonon Polaritons. In B. Di Bartolo, L. Silvestri, M. Cesaria, & J. Collins (Eds.), *Quantum Nano-Photonics* (pp. 425–426). Dordrecht: Springer. doi:10.1007/978-94-024-1544-5_44.

Titel NATO Advanced Study Institute on Quantum Nano-Photonics

Veranstaltungsort Erice, Sicily, Italy

Start-/Enddatum 2017-07-03 - 2017-08-04

References

1. Caldwell J et al (2015) Low-loss, infrared and terahertz nanophotonics using surface phonon polaritons. *Nano* 4(1):44–68
2. Razdolski I et al (2016) Resonant enhancement of second-harmonic generation in the mid-infrared using localized surface phonon polaritons in subdiffractive nanostructures. *Nano Lett* 16(11):6954–6959
3. Passler NC et al (2017) Second-harmonic generation from critically coupled surface phonon polaritons. *ACS Photonics* 4(5):1048–1053
4. Passler NC, Paarmann A (2017) Generalized 4×4 matrix formalism for light propagation in anisotropic stratified media: study of surface phonon polaritons in polar dielectric heterostructures. *J Opt Soc Am B* 34:2128–2139
5. Paarmann A et al (2015) Second harmonic generation spectroscopy in the reststrahl band of SiC using an infrared free-electron laser. *Appl Phys Lett* 107:081101
6. Pufahl K et al (2017) Controlling nanoscale air-gaps for critically coupled surface polaritons by means of non-invasive white-light interferometry (In preparation)

Winta, C., Gewinner, S., Schöllkopf, W., Wolf, M., & Paarmann, A. (2016). Second Harmonic Phonon Spectroscopy of α -Quartz. In *Proceedings of the Conference on Lasers and Electro-Optics*. Washington, DC: OSA. doi:10.1364/CLEO_QELS.2016.FTu4A.5.

Titel Conference on Lasers and Electro-Optics
Veranstaltungsort San Jose, California United States
Start-/Enddatum 2016-06-05 - 2016-06-10

References

1. Liu et al., Phys. Rev. B, 78, 024302 (2008).
2. Bonn et al., Phys. Rev. B, 61, 1101 (2000).
3. Liu et al., Phys. Rev. Lett., 101, 016101 (2008).
4. Dekorsy et al., Phys. Rev. Lett., 90, 5 (2003).
5. Paarmann et al., Appl. Phys. Lett., 107, 081101 (2015).
6. Schöllkopf et al., Proc. SPIE, 9512:95121L (2015).

Paarmann, A., Razdolski, I., Caldwell, J., Giles, A., Giannini, V., Gewinner, S., et al. (2016). Mid-Infrared Second Harmonic Spectroscopy Probing Surface Phonon Polariton Localization in SiC Nanopillars. In *Proceedings of the Conference on Lasers and Electro-Optics*. Washington, DC: OSA. doi:10.1364/CLEO_QELS.2016.FW1B.3.

Titel Conference on Lasers and Electro-Optics
Veranstaltungsort San Jose, California United States
Start-/Enddatum 2016-06-05 - 2016-06-10

References

1. Caldwell et al. Nano Lett. 13, 3690 (2013)
2. Wang et al. Nano Lett. 13, 5051 (2013)
3. Caldwell et al. Nanophotonics 4, 1 (2015)
4. Paarmann et al. Appl. Phys. Lett. 107, 081101 (2015)
5. Schöllkopf et al., Proc. SPIE 9512, 95121L (2015)

Schöllkopf, W., Gewinner, S., Junkes, H., Paarmann, A., Helden, G. v., Bluem, H., et al. (2015). The new IR and THz FEL facility at the Fritz Haber Institute in Berlin. In *Proceedings of SPIE*. Bellingham, Washington: SPIE.

Titel Advances in X-ray Free-Electron Lasers Instrumentation III
Veranstaltungsort Prague, Czech Republic
Start-/Enddatum 2015-04-13
Keine Beteiligung

Invited talks ab 2015

Stefan Truppe

Truppe, S. (2018). *Laser Cooling Molecules to Below the Doppler Limit*. Talk presented at 2018 Conference on Cold and Controlled Molecules and Ions (CCMI). Athens, GA, USA. 2018-03.

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