

PEER REVIEWED PUBLICATIONS

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- 2012 14) AW Hauser and P Schwerdtfeger. Nanoporous Graphene Membranes for Efficient $^3\text{He}/^4\text{He}$ Separation. *J. Phys. Chem. Lett.*, 3:209–213, 2012. doi:10.1021/jz201504k
- 2011 13) K Beloy, AW Hauser, A Borschevsky, VV Flambaum, and P Schwerdtfeger. Effect of α variation on the vibrational spectrum of Sr_2 . *Phys. Rev. A*, 84:062114, Dec 2011. doi:10.1103/PhysRevA.84.062114
- 12) AW Hauser and WE Ernst. Jahn-Teller Effect and Spin-Orbit Coupling in Heavy Alkali Trimers. In M. Atanasov, C. Daul, and P. Tregenna-Piggott, editors, *Vibronic Interactions and the Jahn-Teller Effect - Theory and Applications*, volume 23 of *Progress in Theoretical Chemistry and Physics*, pages 301–316. Springer, 2011. URL: <http://www.springer.com/chemistry/book/978-94-007-2383-2>
- 11) K Beloy, MG Kozlov, A Borschevsky, AW Hauser, VV Flambaum, and P Schwerdtfeger. Rotational spectrum of the molecular ion NH^+ as a probe for α and $m(e)/m(p)$ variation. *Phys. Rev. A*, 83(062514):062514, Jun 2011. doi:10.1103/PhysRevA.83.062514
- 10) C Giese, F Stienkemeier, M Mudrich, AW Hauser, and WE Ernst. Homo- and heteronuclear alkali metal trimers formed on helium nanodroplets. Part II. Femtosecond spectroscopy and spectra assignments. *Phys. Chem. Chem. Phys.*, 13:18769–18780, 2011. doi:10.1039/C1CP21191A
- 9) AW Hauser and WE Ernst. Homo- and heteronuclear alkali metal trimers formed on helium nanodroplets. Part I. Vibronic spectra simulations based on ab initio calculations. *Phys. Chem. Chem. Phys.*, 13:18762–18768, 2011. doi:10.1039/C1CP21163C
- 2010 8) AW Hauser, G Auböck, C Callegari, and WE Ernst. Relativistic Jahn-Teller effects in the quartet states of K_3 and Rb_3 : A vibronic analysis of the $2^4E' \leftarrow 1^4A'_2$ electronic transitions based on ab initio calculations. *J. Chem. Phys.*, 132:164310, 2010. doi:10.1063/1.3394015
- 7) AW Hauser, C Callegari, P Soldán, and WE Ernst. A Jahn-Teller analysis of K_3 and Rb_3 in the electronic states $1^2E'$ and $1^2E''$. *Chem. Phys.*, 375:73–84, 2010. doi:10.1016/j.chemphys.2010.07.025
- 2009 6) AW Hauser, C Callegari, and WE Ernst. Level-Structure and Magnetic Properties from One-Electron Atoms to Clusters with Delocalized Electronic Orbitals: Shell Models for Alkali Trimers. In P Piccuch, J Maruani, G Delgado-Barrio, and S Wilson, editors, *Advances in the theory of atomic and molecular systems: Dynamics, spectroscopy, clusters, and nanostructures*, volume 20, pages 201–215, E Lansing, MI, 2009. Springer. doi:10.1007/978-90-481-2985-0_10

- 2008
- 5) J Nagl, G Auböck, AW Hauser, O Allard, C Callegari, and WE Ernst. High-spin alkali trimers on helium nanodroplets: Spectral separation and analysis. *J. Chem. Phys.*, 128:154320, 2008. [doi:10.1063/1.2906120](https://doi.org/10.1063/1.2906120)
 - 4) AW Hauser, C Callegari, P Soldán, and WE Ernst. On the doublet states of the potassium trimer. *J. Chem. Phys.*, 129:044307, 2008. [doi:10.1063/1.2956492](https://doi.org/10.1063/1.2956492)
 - 3) B Hetenyi and AW Hauser. Extended Hartree-Fock method based on pair density functional theory. *Phys. Rev. B*, 77(155110):155110, Apr 2008. [doi:10.1103/PhysRevB.77.155110](https://doi.org/10.1103/PhysRevB.77.155110)
 - 2) J Nagl, G Auböck, AW Hauser, O Allard, C Callegari, and WE Ernst. Heteronuclear and homonuclear high-spin alkali trimers on helium nanodroplets. *Phys. Rev. Lett.*, 100(063001):063001, Feb 2008. [doi:10.1103/PhysRevLett.100.063001](https://doi.org/10.1103/PhysRevLett.100.063001)
- 2007
- 1) J Nagl, AW Hauser, G Auböck, C Callegari, and WE Ernst. Optical spectroscopy of potassium-doped argon clusters. Experiments and quantum-chemistry calculations. *J. Phys. Chem. A*, 111:12386–12397, 2007. [doi:10.1021/jp075951e](https://doi.org/10.1021/jp075951e)