

PUBLICATIONS OF THOMAS ØSTERGAARD SØRENSEN

REFEREED FULL PAPERS

- (1) ‘Electron wavefunctions and densities for atoms’.
Ann. Henri Poincaré, **2** (2001), 77–100.
Joint with M. and T. Hoffmann-Ostenhof.
- (2) ‘The electron density is smooth away from the nuclei’.
Comm. Math. Phys., **228** (2002) no. 3, 401–415.
Joint with S. Fournais and M. and T. Hoffmann-Ostenhof.
- (3) ‘Analyticity of the density of electronic wavefunctions’.
Ark. Mat., **42** (2004), 87–106.
Joint with S. Fournais and M. and T. Hoffmann-Ostenhof.
- (4) ‘Sharp Regularity Results for Many-Electron Wave Functions.’
Comm. Math. Phys., **255** (2005) no. 1, 183–227.
Joint with S. Fournais and M. and T. Hoffmann-Ostenhof.
- (5) ‘The large- Z behaviour of pseudorelativistic atoms’.
J. Math. Phys., **46** (2005), 052307.
- (6) ‘Non-Isotropic Cusp Conditions and Regularity of the Electron Density of Molecules at the Nuclei’.
Ann. Henri Poincaré, **8** (2007), 731–748.
Joint with S. Fournais and M. and T. Hoffmann-Ostenhof.
- (7) ‘On the convergence of eigenfunctions to threshold energy states’.
Proc. R. Soc. Edinb., Sect. A, Math., **138A** (2008), 169–187.
Joint with E. Stockmeyer.

- (8) ‘Positivity of the spherically averaged atomic one-electron density’.
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Joint with S. Fournais and M. and T. Hoffmann-Ostenhof.
- (9) ‘Hartree-Fock Theory for Pseudorelativistic Atoms’.
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- (10) ‘Third Derivative of the One-Electron Density at the Nucleus’.
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- (11) ‘Analytic Structure of Many-Body Coulombic Wave Functions’.
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- (12) ‘Analytic structure of solutions to multiconfiguration equations’.
J. Phys. A: Math. Theor., **42** (2009), 315208.
Joint with S. Fournais and M. and T. Hoffmann-Ostenhof.
- (13) ‘Relativistic Scott Correction for Atoms and Molecules’.
Comm. Pure Appl. Math., **63** (2010), no. 1, 39–118.
Joint with J. P. Solovej and W. L. Spitzer.
- (14) ‘The electron densities of pseudorelativistic eigenfunctions are smooth away from the nuclei’.
Comm. Partial Differential Equations, **35** (2010), no. 7, 1276–1291.
Joint with S. Fournais.

REFEREED CONFERENCE PUBLICATIONS

- (15) ‘On the regularity of the density of atomic wavefunctions’.
In ‘Mathematical Results in Quantum Mechanics’, *Contemp. Math.*, **307**, Amer. Math. Soc., Providence, RI, 2002. (Refereed proceedings from QMath-8, Mexico, December 10–14, 2001.) Joint with S. Fournais and M. and T. Hoffmann-Ostenhof.

- (16) ‘Local and global properties of eigenfunctions and one-electron densities of Coulombic Schrödinger operators’.
In AIP Conference Proceedings **998**, 70–84. (Refereed proceedings from ‘Quantum Few-Body Systems’, Aarhus (Denmark), 19–20 March 2007.)
Joint with S. Fournais and M. and T. Hoffmann-Ostenhof.