Abstract Submitted
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A comprehensive study of electron collisions with heavy noble gases[1] M. ALLAN, University of Fribourg, K. FRANZ, J. BÖMMELS, T.H. HOFFMANN, M.-W. RUF, H. HOTOP, University of Kaiserslautern, O. ZATSARINNY, K. BARTSCHAT, Drake University — Over the past few years, our group has extensively studied elastic and inelastic electron scattering from the heavy noble gases Ne, Ar, Kr, and Xe. High-resolution experimental data, obtained in Fribourg and Kaiserslautern (see, e.g., [1-4] and references therein) were compared with theoretical predictions from semi-relativistic and fully relativistic B-spline R-matrix (close-coupling) calculations (see [5] and references therein). In most cases the agreement between experiment and theory is excellent, thus providing confidence in suggesting extensive datasets for state-to-state transitions from these calculations for use in the modelling of discharges involving heavy noble gases.

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[3] M. Allan *et al.*, J. Phys. B **42** (2009), 044009.
[4] T.H. Hoffmann *et al.*, J. Phys. B **43** (2010) 085206.
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Klaus Bartschat
Drake University

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