QED EFFECTS IN H_2

KRZYSZTOF PACHUCKI, *Faculty of Physics, University of Warsaw, Hoża 69, 00-681 Warsaw, Poland*;
JACEK KOMASA, *Faculty of Chemistry, A. Mickiewicz University, Grunwaldzka 6, 60-780 Poznań, Poland*.

The electron self-interaction and the vacuum polarization, the two effects predicted by Quantum Electrodynamics (QED), have been accurately calculated for H_2 and its isotopomers[a]. The resulting theoretical predictions will be compared with state of the art measurements of dissociation energies, vibrational and rotational transitions. New developments for the calculation of higher order QED effects will be presented.

[a] J. Komasa, K. Piszczatowski, G. Łach, M. Przybytek, B. Jeziorski, and K. Pachucki, JCTC **7**, 3105 (2011)