

ON THE NUMBER OF ELECTRONS THAT A NUCLEUS CAN
BIND

Phan Thành Nam

University of Cergy-Pontoise

It is conjectured that a neutral atom can bind at most one or two extra electrons. In this talk, we shall show that a classical nucleus of charge Z can bind at most $1.22Z + 3Z^{1/3}$ non-relativistic quantum electrons. This improves Lieb's upper bound $2Z + 1$ when $Z \geq 6$.

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