

Abstract Submitted  
for the DNP11 Meeting of  
The American Physical Society

**Ab initio studies of light nuclei**<sup>1</sup> CHRISTIAN FORSSÉN, Chalmers University of Technology — The ab initio no-core shell model (NCSM) is a well-established theoretical framework aimed at an exact description of nuclear structure starting from high-precision interactions between the nucleons. We consider realistic two- and three-nucleon interactions and will also discuss techniques based on unitary transformations that provide many-body Hamiltonians with superior convergence properties. The performance of the NCSM within nuclear physics will be exemplified by showing results from studies of light nuclei.

<sup>1</sup>This work was supported by the Swedish Research Council and the European Research Council under the FP7.

Christian Forssén  
Chalmers University of Technology

Date submitted: 30 Jun 2011

Electronic form version 1.4