

# **Business opportunities for materials science software**

**Kurt Stokbro**

Stokbro Invest, Rungsted Strandvej 60B, DK-2960 Rungsted Kys, Denmark

**Key Words:** *Atomic-scale modelling, electronic-structure methods, Quantum Computing, Market Analysis, Business startup.*

In 2002 my research group developed a new methodology for simulating electron transport in nanoscale systems[1] which today has become the de-facto standard for ab'initio modelling of electron transport. Instead of making the methodology freely available in an open source software package I decided to pursue a non-conventional avenue in the European electronic structure community and make it a commercial software product, what today is the QuantumATK package[2]. QuantumATK is today part of Synopsys and used by all the major semiconductor companies for developing next generation technology nodes and 35 full time employees are involved in the development, support and sales of the package. I will analyze how we could successfully enter the very competitive market for commercial atomic-scale modelling software and discuss some of the opportunities that exist today for new entrants.

## **REFERENCES**

- 1] M. Brandbyge, J. L. Mozos, P. Ordejon, J. Taylor, and K. Stokbro, Density functional method for nonequilibrium electron transport, PRB 65, 165401 (2002)
- [2] S. Smidstrup et al., QuantumATK: An integrated platform of electronic and atomic-scale modelling tools. Journal of Physics: Condensed Matter 32.1, 15901 (2019)