Symposium Frontiers of Electronic Structure Theory: Many-body Effects on the Nano-Scale (SYME)

jointly organized by
the Semiconductor Physics Division (HL),
the Chemical and Polymer Physics Division (CPP),
the Metal and Material Physics Division (MM),
the Surface Science Division (O), and
the Low Temperature Physics Division (TT)

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The progress in semiconductor- and metal-based nanotechnology gave access to unprecedented control of many-body effects in small systems from macro-molecules to mesoscopic structures. A particular focus of the Symposium is to bring the predictive and descriptive power of modern electronic-structure theory closer to experimental work in semiconductor physics, surface science, magnetism, and chemical physics.

The Symposium "Frontiers of Electronic Structure Theory" is completed by six joint sessions hosted by the Surface Science Division including six Invited Talks and more than 50 Contributed Talks.

Overview of Invited Talks and Sessions

(Lecture room: H 0105)

Invited Talks

SYME 1.1	Fri	9:30–10:00	H 0105	**Excitations and charge transfer phenomena in C based systems** — •Elisa Molinari
SYME 1.2	Fri	10:00–10:30	H 0105	**Towards optimal correlation factors for many-electron perturbation theories** — •Andreas Grüneis
SYME 1.3	Fri	10:30–11:00	H 0105	**Towards an ab-initio description of high temperature superconductivity** — •Garnet Chan
SYME 1.4	Fri	11:15–11:45	H 0105	**Correlation effects in unconventional superconductors: from micro- to nano- and macroscales.** — •Roser Valenti
SYME 1.5	Fri	11:45–12:15	H 0105	**Stochastic density functional and GW theories scaling linearly with system size** — •Roi Baer, Daniel Neuhauser, Eran Rabani

Sessions

SYME 1.1–1.5	Fri	9:30–12:15	H 0105	**Frontiers of Electronic Structure Theory: Many-body Effects on the Nano-scale**
SYME 2.1–2.11	Tue	10:30–13:30	MA 004	**Frontiers of Electronic Structure Theory: Many-Body Effects on the Nano-Scale I**
SYME 3.1–3.6	Tue	14:00–15:45	MA 004	**Frontiers of Electronic Structure Theory: Many-Body Effects on the Nano-Scale II**
SYME 4.1–4.11	Wed	10:30–13:30	MA 004	**Frontiers of Electronic Structure Theory: Many-Body Effects on the Nano-Scale III**
SYME 5.1–5.13	Wed	15:00–18:30	MA 004	**Frontiers of Electronic Structure Theory: Many-Body Effects on the Nano-Scale IV**
SYME 6.1–6.10	Thu	10:30–13:15	MA 004	**Frontiers of Electronic Structure Theory: Many-Body Effects on the Nano-Scale V**
SYME 7.1–7.13	Thu	15:00–18:30	MA 004	**Frontiers of Electronic Structure Theory: Many-Body Effects on the Nano-Scale VI**