



Laboratoire National des Champs Magnétiques Intenses
Grenoble - Toulouse

QCSMF

Workshop on QUANTUM CHEMISTRY IN STRONG MAGNETIC FIELD

Date : 13 – 14 September 2010

Venue : LNCMI, Toulouse, France

*In collaboration with the Center for Theoretical and Computational Chemistry (CTCC),
Norway*



Organizing Committee :

Geert Rikken (CNRS-Toulouse, France) ; Carlo Rizzo (UPS-Toulouse, France) ;

Antonio Rizzo (CNR-Pisa, Italy) ; Trygve Helgaker (UIO-Oslo, Norway)

Motivation :

The study of new magneto-optical phenomena in quantum systems or systems of reduced symmetry becomes nowadays possible combining state of the art optical instruments with strong magnetic fields. Our goal is to bring together experts in the production of strong magnetic fields, experimentalists in magneto-optics, and quantum chemists to present and discuss the perspectives of the field in view of tighter collaborations between all these different actors.

Registration :

The number of participants is limited to 40. We strongly recommend early registration by sending an e-mail to carlo.rizzo@lncmi.cnrs.fr. No participation fee is demanded. The possibility to exhibit posters is available.

Website :

<http://www.toulouse.lncmi.cnrs.fr/spip.php?article249>





Preliminary Program :

September 13th

Arrivals at LNCMI Toulouse

12:30 - 14:00 Welcome buffet lunch

14:00 - 14:20 **L. Barron** (Glasgow, United Kingdom) "Opening"

14:20 - 15:00 **V. Bezchastnov** (Heidelberg, Germany) "Magnetic binding and cyclotron transitions of the ions: applications to laboratory and astrophysically strong magnetic fields"

15:00 - 15:40 **T. Saue** (Toulouse, France) "Magnetism in a relativistic perspective"

Coffee break

16:10 - 16:50 **O. Portugall** (Toulouse, France) "Trends in high magnetic fields"

16:50 - 17:30 **P. Norman** (Linköping, Sweden) "Natural and induced chiralities in the framework of complex response theory"

17:30 - 18:10 **S. Coriani** (Trieste, Italy) "Magneto-optical effects within response function theory"

18:10 - 18:50 **P. Christianen** (Nijmegen, Netherlands) "Chemical self-assemblies in High Magnetic Fields"

September 14th

8:30 - 9:10 **G. Rikken** (Toulouse, France) "Non linear magneto-optics"

9:10 - 9:50 **A. Soncini** (Leuven, Belgium) "Quantum chemistry methods for molecular carbon networks in strong magnetic fields"

9:50 - 10:30 **E. Tellgren** (Oslo, Norway) "Gauge-origin invariant calculations of excitation energies in molecules subject to strong magnetic fields"

Coffee break

11:00 - 11:40 **R. Battesti** (Toulouse, France) "Measurements of the Cotton-Mouton and Inverse Cotton-Mouton effect"

11:40 - 12:20 **J. Vaara** (Oulu, Finland) "Calculations of nuclear spin optical rotation"

12:20 - 12:30 **L. Barron** (Glasgow, United Kingdom) "Closing"

12:30 - 14:00 Farewell buffet lunch

Departures

In the afternoon a visit of the LNCMI is proposed to participants.