

Schedule: « Chirality, Spin & Reactivity» (ULB – Campus Plaine – Building NO – 5th Floor)

The workshop will focus the intimate link between molecular chirality and electron spin. Chemists & physicists but also experimentalists & theoreticians will confront their ideas. Understanding but also use of chiral-induced spin selectivity (CISS) effect. CISS and electrical magneto chiral anisotropy effects (eMChA). No online presentations. 30 min talks + 10 min discussion.

Tuesday November 12, 2024			
09:30 - 10:00	Registration and coffee		
10:00 - 10:20	Ben Feringa & Yves Geerts	Brussels	<i>Introduction and context</i>
10:20 - 11:00	Ron Naaman		<i>The CISS effect- Opportunities and Challenges</i>
11:00 - 11:40	Helmut Zacharias		<i>The spin of photoelectrons transmitted through molecules adsorbed on metal surfaces</i>
11:40 - 12:20	Daniel Bürgler		<i>Spin-Selective Electron Transport and Enantioselective Adsorption of Heptahelicene on Co Surfaces</i>
12:20 - 13:00	David Waldeck		<i>Chiral Induced Spin Selectivity and Its Application for Spin Control in Redox Chemistry</i>
13:00 - 14:00	Sandwich lunch and informal discussions		
14:00 - 14:40	Yossi Paltiel		<i>Chiral phonons and the CISS effect</i>
14:40 - 15:20	Matteo Mannini		<i>Spin-Selective Electron Transport through monolayers of magnetic molecules</i>
15:20 - 16:00	Narcis Avarvari		<i>CISS and eMChA with helicenes and tetrathiafulvalene</i>
16:00 - 16:30			
16:30 – 17:45	Magali Lingenfelder		<i>Beyond Nanostructures: Will Chiral and Magnetic Fields Transform Clean Energy Technologies?</i>
17:45 - 18:00	Break and installation of posters - POSTER SESSION IN FRONT OF FORUM F – QUARTIER MAGENTA		
18:00 - 20:00	Poster session and buffet of Belgian gastronomic specialties		

Wednesday November 13, 2024			
10:00 - 10:40	Assaf Ben Moshe		<i>Enantioselectivity in preparation of nanocrystals: lattice, shape, defects and electronic structure</i>
10:40 - 11:20	Sara Bals		<i>3D characterization of chiral metal nanoparticles by advanced electron tomography</i>
11:20 - 12:00	Furkan Ozturk		<i>A New Spin on the Origin of Biological Homochirality</i>
12:00 - 12:40	Yves Geerts		<i>On the difficulties to control chiral symmetry breaking by external fields</i>
12:40 - 12:50	Group picture in Solvay Room		
12:50 - 13:30	Sandwich lunch and informal discussions		
13:30 - 14:10	Hiroshi Yamamoto		<i>Chiral molecules and helical electrons</i>
14:10 - 14:50	Yoshihiko Togawa		<i>Generation and Transfer of Spin and Phonon Angular Momenta with chiral Inorganic materials</i>
14:50 - 15:30	Michael Wasielewski		<i>Chirality-Induced Spin Selectivity in Electron Donor-Acceptor Systems</i>
15:30 - 16:10	Angela Wittmann		<i>Chiral-induced unidirectional spin-to-charge conversion</i>
16:10 - 16:30	Coffee break		
16:30 - 17:10	Jonas Fransson		<i>Chirality facilitates two-electron pairing and processes</i>
17:10 - 17:50	Bert Meijer		<i>The role of supramolecular chemistry in spin-controlled chemistry</i>
18:00 – 18:30	Public transportation to downtown Brussels		
18:30 – 19:30	Free time downtown Brussels to drink a beer, to visit or to buy chocolates		
19:30 - 23:00	Banquet downtown Brussels		

Thursday November 14, 2024			
10:00 - 10:40	Roland Resel		<i>Polymorph Selection by Thin Film Preparation: the Appearance of Chiral Phases</i>
10:40 - 11:20	Christoph Tegenkamp		<i>Electron transport along chiral polypeptides: the role of coupling, order and electric fields</i>
11:20 - 12:00	Steven De Feyter		<i>Chirality and CISS of self-assembled molecular networks formed at the liquid-solid interface</i>
12:00 - 12:40	Bart van Wees		<i>Mechanism for electrostatically generated magnetoresistance in chiral systems without spin dependent transport</i>
12:40 - 13:30	Sandwich lunch and informal discussions		
13:30 - 14:10	Pierre Seneor		<i>Molecular spintronics: new opportunities for spintronics</i>
14:10 - 14:50	Robert Bittl		<i>Many-Body Effects in Chirality-Induced Spin Selectivity</i>
14:50 - 15:30	Carmen Herrmann		<i>First-principles approaches for chiral induced spin selectivity</i>
15:30 – 16:00	Ben Feringa & All		<i>Conclusions</i>
16:00	Departure		