

Emerging Methodologies for Paramagnetic NMR and Dynamic Nuclear Polarization in Biological and Inorganic Materials

Monday- Aug 7, 2017

8:15 - 8:30 am		Welcome (Ann McDermott, Tatyana Polenova)
Session 1 (Ann McDermott)		
8:30 - 9:10	Bob Griffin	Time Domain and Overhauser DNP at High Frequencies
9:10 - 9:50	Kent Thurber	Low-Temperature (25 K) DNP for Solid-state MAS NMR: Radicals and the Cross Effect DNP Mechanism
9:50 - 10:05		Coffee break
Session 2 (Sophia Hayes)		
10:05- 10:45	Gaël De Paëpe	MAS-DNP at Low Temperature Without Depolarization
10:45 - 11:25	Toshimichi Fujiwara	High-Field DNP and Cellular Solid-State NMR Using Paramagnetism under Low Temperatures
11:25 - 12:05	Joanna Long	Thoughts on Exploiting DNP for Biomolecular NMR at High Fields
12:05- 6:00 pm		Free time
Session 3 (Chris Jaroniec)		
6:00 - 6:40	Song-I Han	Exploiting Electron Spin Dynamics for Dynamic Nuclear Polarization
6:40 - 7:20	Alexander Barnes	Electron Decoupling With Frequency Agile Gyrotrons
7:20 - 8:00	Ivan Sergeyev	DNP Applications in the Study of Pharmaceuticals
8:00 - 8:40	Jennifer Mathies	Effective NOVEL with "Reasonable" Microwave Powers

Tuesday - Aug 8, 2017

8:30 am - 12:20 pm		Free time
Session 4 (Anne Lesage)		
12:20 - 1:00	Angela Gronenborn	Multi-Domain Proteins and NMR – Perfect Targets for Integrated Structural Biology Approaches
1:00 - 1:40	Christopher Jaroniec	Solid-State NMR Structural Studies of Proteins Using Paramagnetic Probes
1:40 - 2:20	Guido Pintacuda	Measuring and Making Use of Paramagnetic Shifts
2:20 - 2:40		Coffee break
Session 5 (Ivan Sergeyev)		
2:40 - 3:20	Ann McDermott	Tagged and Targeted Radicals for DNP
3:20 - 4:00	Thomas Meersmann	Paramagnetic Contrast Agents and Hyperpolarized ¹²⁹ Xe – Combining Two ‘ Natural Enemies’ for Chemical Exchange Relaxation Transfer
4:00 - 4:40	Hartmut Oschkinat	Some Thoughts about Radicals, Efficiency and Applications of DNP
4:40 - 6:00		Free time
Special Event: Town Talk, Telluride Conference Center		
6:00 - 7:00	Sophia Hayes	Tracking Carbon Dioxide Capture and Mineral Sequestration by NMR–Molecular 'Fingerprints' of CO ₂ and Carbonates

Wednesday - Aug 9, 2017

8:30 am - 1:00 pm		Free time
Session 7 (Moreno Lelli)		
1:00 - 1:40	Anne Lesage	New Radicals for High-Field DNP
1:40 - 2:20	Marina Bennati	New Perspectives in Liquid DNP Using the ^{13}C 'Scalar' Overhauser Mechanism
2:20 - 3:00	Björn Corzilius	Novel Mechanisms of Polarization Propagation Under MAS DNP
3:00 - 3:20		Coffee break
Session 8 (Alexander Barnes)		
3:20 - 4:00	Gunnar Jeschke	Frequency-Swept Excitation of Electron-Nuclear Spin Systems
4:00 - 4:40	Thomas Prisner	Continuous-Flow DNP Polarizer for In-Vivo MRI Applications at 1.5 T
4:40 - 7:00		Free time
Session 8 (Gaël De Paëpe)		
7:00 - 7:40	Melanie Rosay	Solids DNP at 400 MHz With a 263 GHz Klystron
7:40 - 8:20	Dieter Suter	Polarisation and Depolarisation of Single Nuclear Spins Coupled to the Nitrogen-Vacancy Center in Diamond
8:20 - 9:00	Lyndon Emsley	Dynamics of Nuclear Polarization

Thursday - Aug 10, 2017

8:30 am - 1:00 pm		Free time
Session 9 (Joanna Long)		
1:00 - 1:40	Marek Pruski	Studies of Surfaces and Interfacial Regions of Materials by Dynamic Nuclear Polarization Solid-State NMR
1:40 - 2:20	Zhehong Gan	Ground-Level Small Amplitude Motions Contribute to the Nuclear Overhauser Effect in Direct ^{13}C MAS DNP
2:20 - 3:00	Moreno Lelli	DNP at Variable Temperature and Very Fast MAS
3:00 - 3:20		Coffee break
Session 10 (Zhehong Gan)		
3:20 - 4:00	Yoshitaka Ishii	Solid-State NMR Studies of Amyloid Assemblies and Carbon-Nano Materials
4:00 - 4:40	Tatyana Polenova	MAS-DNP to Probe Structure and Dynamics of HIV-1 Protein Assemblies
4:40 - 5:20	Sophia Hayes	OPNMR of Semiconductor Interfaces
5:20 - 5:40		TBA
5:40 - 6:00		Free time
6:00 - 9:00		TSRC BBQ