

15thInternational Conference on the
Scientific and Clinical Applications
of Magnetic CarriersParis, France
May 26 - 29, 2026<https://magneticmicrosphere.com>

15th International Conference on the Scientific and Clinical Applications of Magnetic Carriers

Tuesday, May 26, 2026				
9:00	Registration desk opens at the CICSU auditorium, Universite de Sorbonne, 4 Place Jussieu			
10:00	Secret, Emilie	Opening of the Conference and Welcome Address by the Organization Committee	Paris, France	Intro 1
10:10	Schuetz, Wolfgang & Zborowski, Maciej	Our International Conference is 30 Years Old - An Informal History by the Founders	Rostock, Germany & Cleveland, OH, USA	Intro 2
10:30	Häfeli, Urs	Short Review of the Last 2 Years of Magnetic Carriers Research	Vancouver, BC, Canada	Intro 3
11:00	Coffee break			
11:30	Battle, Xavier	Short Magnetic Nanoparticle Tutorial: The Magnetic Nanoparticle Iceberg	Barcelona, Spain	Tutorial 0
	Session 1: Magnetic Microrobots and Nanorobots			Chair: Christine Ménager
12:00	Zabow, Gary	Turning non-magnetic particles magnetic	Boulder, CO, USA	Talk 1
12:15	Bami-Chatenet, Yann	Magnetically-Steerable Drug-Loaded Microspheres for the Transarterial Chemoembolization of Liver Tumors via Magnetic Resonance Navigation	Montreal, Canada	Talk 2
12:30	Ghosh, Ambarish	Magnetic Helical Nanobots as Local Sensors: from model fluids to cells, and inside living animals	Bangalore, India	Talk 3
12:45	Mistral, Jules	Quantitative Accumulation of Magnetotactic Bacteria for Tumor Targeting by Application of Gradient Magnetic Fields	Saint-Paul-lez-Durance, France	Talk 4
13:00	Park, Myungjin	Magnetic Torque Trapping Enables Enhanced Retention and Translocation of Microrobots	Zürich, Switzerland	Talk 5
13:15	Lak, Aidin	Magnetic DNA origami nanorotors	Braunschweig, Germany	Talk 6
13:30	Lunch			
	Session 2: Biological Applications I			Chair: Sylvie Bégin-Colin
14:45	Kaub, Leon	Imaging Magnetic Stray Fields from Magnetite Nanoparticles in Human Brain Tissue with Nitrogen-Vacancy Centers	Paris, France	Invited Talk 1
15:30	Ko, Min Jun	Magnetically Programmable NK Cell Clusters Enabled by Magnetic Mesocrystals for Cancer Immunotherapy	Chicago, IL, USA	Talk 7
15:45	Ota, Satoshi	Tumor characterization via magnetization dynamics of magnetic nanoparticles for cancer theranostics	Hamamatsu, Japan	Talk 8
16:00	Coffee break			
	Session 3: Biological Applications II - Flash Talks			Chair: Lucia Gutierrez
16:30	Aderhold, Eric	Continuous Coagulation Monitoring of Human Blood via Magnetic Particle Spectroscopy	Lübeck, Germany	Talk 9
16:37	Gomez, Jenifer	Iron Regulation Proteins and Magnetic Behavior of Breast Cancer Stem Cells: Could Iron Be A Universal Marker for Label-Free Sorting?	Lubbock, TX, USA	Talk 10
16:44	Ma, Yunn-Hwa	Tannic Acid-Coating Augments Nanoparticle Uptake by Laminin Receptor-Mediated Endocytosis: Implication in Tumor Targeting	Tao-Yuan, Taiwan	Talk 11
16:51	Paez Rodriguez, Amira	Dynamic behavior and intracellular assembly of magnetic nanoparticle-loaded vesicles under AC magnetic stimulation.	Zaragoza, Spain	Talk 12
16:58	Reichl, Teresa	Magnetic Nanoparticles as Sensor for Brain Perfusion	Würzburg, Germany	Talk 13
17:05	Wang, Xuyiling	Characterising exogenous and endogenous magnetic nanomaterials in biological samples using a magneto-optical multifunctional microscope	Stoke-on-Trent, UK	Talk 14
17:12	Marsalin, Akash	Structural Engineering of Fe ₃ O ₄ Mesocrystals for Enhanced Magneto-Optical Cancer Therapy	Chennai, India	Talk 15
17:19	Liu, Minrui	Boosting T1 Relaxivity with Trace Mg-Doping in Ultrasmall Iron Oxide Nanoparticles for Subsegmental Pulmonary Embolism Imaging	Chengdu, China	Talk 16
17:30	Pellegrino, Teresa	Magnetic Nanoparticles: From Their Synthesis to Magnetic Hyperthermia, Cancer Immune Therapy and Cell Tracking Applications	Genoa, Italy	Invited Talk 2
18:15	Poster session I (Posters 1-53)			
19:30	Reception, generously sponsored by micromod			
21:00	Go and enjoy the night life in Paris			

Wednesday, May 27, 2026				
8:30	Registration desk opens at the CICSU auditorium, Universite de Sorbonne, 4 Place Jussieu			
	This is also the day of the spouse tour (Monet garden in Giverny)			
9:00	Van Leuven, Levy	Chemistry and Derivatization of Magnetic Nanoparticles - Part 1	Mons, Belgium	Tutorial 1
	Session 4: Magnetic Separation			Chair: Anna Bakenecker
9:30	Bünning, Matthis	Continuous-Flow Lithium Extraction from Geothermal Brines Using Magnetic Nanoparticles	München, Germany	Talk 17
	Session 5: Magnetic Particle Imaging (MPI)			Chair: Anna Bakenecker
9:45	Bermudez-Berrios, Esteban	Quantitative Evaluation of Nanoparticle Delivery to Lymph Nodes Using Magnetic Particle Imaging	Gainesville, FL, USA	Talk 18
10:00	Rösch, Esther	SMART RHESINs: A Comparative Specific Absorption Rate Analysis of Native and Encapsulated Synomag Nanoparticles for MPI-Assisted Magnetic Fluid Hyperthermia	Karlsruhe, Germany	Talk 19
10:15	Coffee break			
10:45	Nozka, Aniela	Formulation of nanocluster tracers with tunable magnetic particle imaging performance	Gainesville, FL, USA	Talk 20
11:00	Valdes, Daniela	Quantification of Magnetic Particle Imaging Signal in Biomedically Relevant Conditions Using a Mouse Phantom	Gainesville, FL, USA	Talk 21
11:15	Zhong, Jing	Mixing-Frequency Magnetic Particle Imaging System for 3D in-vivo Tumor Imaging	Beijing, China	Talk 22
11:30	Dutz, Silvio	Project harmoMPI: Scanner-Independent Functional Phantoms for Harmonizing Magnetic Particle Imaging	Zwickau, Germany	Talk 23
11:45	Bulte, Jeff	Engineering Magnetoheranostics for Magnetic Particle Imaging	Baltimore, MD, USA	Invited Talk 3
12:30	Lunch			
	Session 6: Magnetic Imaging Methods (MRI / Ultrasound)			Chair: Jeff Bulte
13:45	Brero, Francesca	Performance Analysis of Quantitative Susceptibility Mapping Algorithms in Phantom and Preclinical MRI Data	Pavia, Italy	Talk 24
14:00	Horak, Daniel	Magnetically Responsive Upconversion Nanoparticles: Optical Luminescence and MRI of Langerhans islets	Prague, Czech Republic	Talk 25
14:15	Levy, Benjamin	Ultrasound-Based Magnetic Nanoparticles Imaging: Improved Magnet Geometries and Elastometry	Easton, PA, USA	Talk 26
14:30	Reniaud, Jules	Shape-Dependent Magnetomotive Forces: A Framework for Optimizing Particle Geometry in Magnetomotive Ultrasound Imaging	Lund, Sweden	Talk 27
14:45	Mefford, Thompson	Gadolinium-Doped Iron Oxide Nanorods and Nanoflowers as Dual Modality Agents for Magnetic Hyperthermia and MRI	Clemson, SC, USA	Talk 28
15:00	Fan, Haiming	Hepatocyte-Specific Nanoparticle for Sensitive and Precise Hepatobiliary Magnetic Resonance Imaging	Xi'an, China	Talk 29
15:15	Coffee break			
	Session 7: Magnetic Hyperthermia			Chair: Jérôme Fresnais
15:45	Rabade Chediak, Maura	Magnetic Hyperthermia-Induced Disruption of Collagen Scaffolds: A Strategy to Overcome the Extracellular Matrix Barrier in Solid Tumours and Fibrotic Diseases	Zaragoza, Spain	Talk 30
16:00	Castro-Torres, Jorge	Histopathological Assessment of Magnetic Fluid Hyperthermia in a Porcine Prostate Model Using a Handheld Induction Heater	Mayaguez, Puerto Rico	Talk 31
16:15	Gascon Gubieda, Alicia	Determining the mechanisms of action of magnetosomes in magnetic hyperthermia cancer treatment	Leioa, Spain	Talk 32
16:30	Hanson, Lise	Improving Measurements of Magnetic Nanoparticle Heating Power	Kgs. Lyngby, Denmark	Talk 33
16:45	Lopez Vazquez, Iago	SLPcalculator: Open-Access Software for Statistically Validated SLP Determination in Magnetic Nanoparticles	Santiago de Compostela, Spain	Talk 34
17:00	Patri, Sofia	Magnetic nanogels for combined hyperthermia and chemotherapy of prostate cancer	London, UK	Talk 35
17:15	Anker, Jeffrey	Catching and Counting Molecules with Buoyant Microbubbles and Magnetic Microspheres for Rapid yet Ultrasensitive Point-of-Care Diagnostics	Clemson, SC, USA	Invited Talk 4
18:00	Poster session II (Posters 54-107) - with Pretzel and Beer generously sponsored by Superbranche			
19:30	Free evening - go and get collaborations going!			

Thursday, May 28, 2026				
8:30	Registration desk opens at the CICSU auditorium, Universite de Sorbonne, 4 Place Jussieu			
9:00	Van Leuven, Levy	Chemistry and Derivatization of Magnetic Nanoparticles - Part 2	Mons, Belgium	Tutorial 2
	Session 8: Magnetic Drug Delivery I			<i>Chair: Jeffrey Anker</i>
9:30	Lafuente, Aritz	Opto-Magnetically Guided Monocytes for Enhanced Nanotherapy in 3D Bioprinted Tumor Models	Barcelona, Spain	Talk 36
9:45	Gigoux, Veronique	Magnetic Field-Induced Drug Delivery From Magnetic Microporous Nanocomposites Through Magnetic Nanoparticles Heating or Motion	Toulouse, France	Talk 37
10:00	Castellanos-Rubio, Idoia	Magnetic Hybrid Microdiscs as Tunable Carriers for Remote Actuation and Biomolecule Delivery	Leioa, Spain	Talk 38
10:15	Kuzhir, Pavel	Physical aspects of field-enhanced degradation of hydrogel networks: a step closer to thrombolysis	Nice, France	Talk 39
10:30	Coffee break			
	Session 9: Magnetic Drug Delivery II			<i>Chair: Simone Schürle</i>
11:00	Santi, Athena	On-Demand Magnetic Field-Responsive Nanodrug for Pain Modulation	San Antonio, TX, USA	Talk 40
11:15	Selzer, Solange	Senolytic nanoplatform to target and eliminate senescent melanoma cells	Zaragoza, Spain	Talk 41
11:30	Trizac-Mattern, Ludivine	Polyhistidine and doxorubicin functionalized magnetic nanoparticles enhancing intracellular heating efficiency in magnetic hyperthermia	Paris, France	Talk 42
11:45	Zelenakova, Adriana	Magnetic Nanocargo-Delivery Platform for Targeted Delivery of Anticancer and Antiviral Drug	Kosice, Slovakia	Talk 43
12:00	Espinal, Maider	Magnetothermally Activated 3D-Printed Implants for Programmable Drug Delivery	Pamplona, Spain	Talk 44
12:15	Begin-Colin, Sylvie	Engineering of Magnetic-Based Nanoplatforms for Theranostic with a Focus on Targeting Strategies	Strasbourg, France	Invited Talk 5
13:00	Lunch			
	Session 10: Magnetic Methods / MPS I			<i>Chair: Pankhurst, Quentin</i>
14:15	Ackers, Justin	Measurement uncertainty analysis of a one-dimensional Magnetic Particle Spectrometer	Lübeck, Germany	Talk 45
14:30	Wang, Jian-Ping	Systematic analysis of parameters affecting colorization performance for magnetic particle spectroscopy applications	Minneapolis, MN, USA	Talk 46
14:45	Naeimabadi, Mina	1D Reconstruction of Magnetic Nanoparticles in an Unshielded Environment Using OPM-Based Magnetorelaxometry	Innsbruck, Austria	Talk 47
15:00	Stockdale, Arabella	Interpreting Magnetic Particle Spectroscopy Through Hierarchical Modeling of Interacting PEG-Coated Iron Oxide Nanoparticles	Clemson, SC, USA	Talk 48
15:15	Veile, Thomas	Simultaneous High-Frequency Magnetometry and AC Calorimetry for Magnetic Nanoparticle Characterization	Kgs. Lyngby, Denmark	Talk 49
15:30	Zverev, Vladimir	Dynamic Magnetic Response of Magnetic Multicore Particles: Competing Anisotropies	Vienna, Austria	Talk 50
15:45	Coffee break			
16:15	Bakenecker, Anna	Magnetic Particle Imaging and Functional Hydrogels for Micro- and Nanorobotics	Darmstadt, Germany	Invited Talk 6
	Session 11: Magnetic Characterizations / Methods / Analytics II			<i>Chair: Leon Kaub</i>
17:00	Arsalani, Soudabeh	Reference measurement site to characterize magnetic nanoparticles employed in biomedical applications	Berlin, Germany	Talk 51
17:15	Liu, Wenzhong	Real-time, rapid optical imaging method for single magnetic nanoparticles	Wuhan, China	Talk 52
17:30	Wang, Yihao	Magnetic molecular nanorulers for resolving conformational changes in nucleic acids at sub-nanometer spatial resolution	Braunschweig, Germany	Talk 53
17:45	Wen, Yumei	QCM Sensing the Magnetically Driven Motion of Particles for Biomolecular Analysis	Shanghai, China	Talk 54
	Session 12: Preparation of Magnetic Nanoparticles I			<i>Chair: Jean-Michel Siaugue</i>
18:00	Stoer, Philip	synomag-pro - The Benchmark for Theranostics	Rostock, Germany	Talk 55
18:15	Cotin, Geoffrey	Dendronized iron oxide: Superspio20 as MPI tracer and magnetic hyperthermia agent	Strasbourg, France	Talk 56
18:30	Meier, Nils	Tuning Core Size of Iron Oxide Magnetic Nanoparticles in Liposome-Based Nanoreactors: An In Situ Approach	Mainz, Germany	Talk 57
19:15	Walk to the Boat			
19:30	Boat tour on the "The River's King" with dinner, generously sponsored by NanoTherics			
21:30	Poster award hand-outs on the boat, generously sponsored by the new journal Magnetic Medicine and by the Nanoscale Journal Family, RSC			
23:30	Return to the Pier			

Friday, May 29, 2026				
8:30	Registration desk opens at the CICSU auditorium, Universite de Sorbonne, 4 Place Jussieu			
9:00	Van Leuven, Levy	Chemistry and Derivatization of Magnetic Nanoparticles - Part 3		Tutorial 3
	Session 13: Preparation of Magnetic Nanoparticles II			<i>Chair: Jean-Michel Siaugue</i>
9:30	Roca, Alejandro	Controlled Solvothermal Growth of Iron Oxide Nanorods with Tunable Size and Magnetic Properties for applications in Biomedicine	Cerdanyola del Valles, Spain	Talk 58
9:45	Shlapa, Yuliia	Magnetic CeO ₂ -Based Nanocomposites: Influence of the Synthesis Route on Structure, Morphology and Bioactivity	Kyiv, Ukraine	Talk 59
10:00	Descours, Pierre-Louis	Novel Magnetic Nanohybrids Coated with Peptides to Cross the human Blood-Brain Barrier and to Target Neuronal Mitochondria	Dijon, France	Talk 60
10:15	Alvaro Gallo Cordova	Continuous-flow microwave polyol synthesis enables scalable production of metallic nanoparticles	Madrid, Spain	Talk 61
10:30	Coffee break			
11:00	Pankhurst, Quentin	Translational R&D - the Endomagnetics Story	London, UK	Invited Talk 7
	Session 14: Preparation of Magnetic Nanoparticles II			<i>Chair: Teresa Pellegrino</i>
11:45	Guerrero Porras, Gabriel	Vectorization of functionalized IONPs with beta-amyloid-targeting ligands to obtain specific MRI contrast agents for the detection of Alzheimer's disease	Strasbourg, France	Talk 62
12:00	Mayr, Erik	Superferromagnetic Disk Particles for Magnetic Particle Imaging and Magnetic Particle Spectroscopy	Zürich, Switzerland	Talk 63
12:15	Radon, Adrian	Carbon-Coated Magnetite in Cancer Therapies: Challenges and Perspectives	Gliwice, Poland	Talk 64
12:30	Ehrlich, Victor	Pressure-Controlled High Temperature Continuous-Flow Synthesis of Iron-Based Nanoparticles: From Metastable Phases to Gold-Iron Heterodimers	Paris, France	Talk 65
12:45	Bouvet, Basile	In-Depth Investigation of the Magnetically Related Properties of Iron Oxide Nanospheres	Paris, France	Talk 66
13:00	Weisspflug, Maria	Magnetothermal-Triggered Response and Self-Healing of Recyclable and Reprocessable Nanocomposites for Actuation Systems	Hamburg, Germany	Talk 67
13:20	Announcement of the next Magnetic Carrier Meeting 2028			
13:30	End of the Meeting			