



European Materials Research Society

2023 Spring Meeting May 29 | June 2

40th Anniversary

Congress & Exhibition Centre, Strasbourg, France

SYMPOSIUM J

Design and scaling up of theranostic nanoplatforms for health:
towards translational studies

Symposium Organizers:

Sylvie BEGIN-COLIN, IPCMS, Strasbourg, France,

Nguyen TK THANH, University College London, U.K.

Sophie LAURENT, University of Mons, Belgium

Teresa PELLEGRINO, IIT, Genova, Italy,

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Monday May 29

J01

Design of molecular-based nanoplatfoms for nanomedecine

Chairperson(s) : BEGIN Sylvie - THANH Nguyen T. K.

Luxembourg (Ground floor)

08:45	1863	INV	A study of the biological Fate of Polymeric and Supramolecular Carriers for Gene delivery	MOYA Sergio
09:15	2730		Leveraging Magnetic Hyperthermia by Means of Hybrid Polymeric Nanostructures	MAI Binh
09:30	1022		Structure switching molecules for biosensors and real-time imaging	PARK Chan Ho
09:45	1630		siRNA incorporated nucleic acid micelles to suppress USE1 expression for lung cancer treatment	KIM Haejoo

Monday May 29

J02

Design of nanomaterials for biomedical applications - 1

Chairperson(s) : LAURENT Sophie - MOYA Sergio

Luxembourg (Ground floor)

10:30	2389	INV	Tuning nanomaterials for biomedical applications : it's all in the coating.	BRUYLANTS Gilles
11:00	2361		Plasmonic and Magnetic Nanoparticles for Biomedical Applications	THANH Nguyen T. K.
11:15	1423		Synthesis of Gold Nanorods for targeted phototherapy of cancer cells	ROMAIN Mélanie
11:30	810	INV	Development of a chelating polymer for a medical device designed for metal extraction: from concept to clinic with Mexbrain	TILLEMENT Olivier

Monday May 29

J03

Polymeric nanoparticles designed for imaging

Chairperson(s) : BRUYLANTS Gilles - TILLEMENT Olivier

Luxembourg (Ground floor)

13:30	2429	INV	Fluorescent polymeric nanoparticles for diagnostics and bioimaging	KLYMCHENKO Andrey
14:00	106		Covalent organic frameworks for fluorescent imaging of hypoxia	SKORJANC Tina
14:15	1833		Developing a FRET based device for RNA biosensing using CRISPR/Cas	CHEN Haihan
14:30	975	INV	Image guided triggered release nanoparticles	THANOU Maya

Monday May 29

J04

Design of biomaterials for nanomedicine

Chairperson(s) : KLYMCHENKO Andrey - THANOU Maya

Luxembourg (Ground floor)

15:00	1940	INV	Bio-inspired apatite particles: a multifunctional platform in nanomedicine	DROUET Christophe
15:30	3		Raman Spectroscopy as a possible alternative to Histology for bone evaluation in Oral / Regenerative Surgery	GATIN Eduard
15:45	16		Physiological polyphosphate as an effective biomaterial for chronic wound healing: Proof of Concept by in vitro studies and clinical applications	PROF. DR. MÜLLER Werner E. G.

Monday May 29

J05

Gel-based Nanomedicines and analysis approaches

Chairperson(s) : DROUET Christophe - PELLEGRINO Teresa

Luxembourg (Ground floor)

16:30	1788	The proton sponge trick for tuned disassembly of nucleic acids delivery systems upon sensing endosomal pH: toward nano carriers with in vivo therapeutic potential	ZUBER Guy
16:45	2638	Design of magnetic hydrogels for AC-field hyperthermia: towards high efficiency and reproducible performance	NIGOGHOSSIAN Karina
17:00	2112	Theranostic Polymeric Nanocarriers Administered to the Brains and Lungs	SOLÉ PORTA Anna
17:15	2502	Au nanoparticles loaded hydrogels for advanced wound care	FOTI Alice
17:30	431	The effect of microscopic calcifications containing Zn on the malignancy of thyroid nodules	GOTNAYER Lotem

Tuesday May 30

J06

Design of theranostic nanoplatfoms-1

Chairperson(s) : PELLEGRINO Teresa - THANH Nguyen T. K.

Luxembourg (Ground floor)

10:00	2253	INV	Designer therapeutic and diagnostic tools: From cancer to chemical weapons	DAVIES Gemma-Louise
10:30	2477		Stimuli-responsive platforms for in vitro cell growth and cancer therapy: towards precision medicine	FORCINITI Stefania
10:45	1379		Study of the influence of Mn ²⁺ -insertion in Prussian blue nanoparticles on their photothermal properties	SENE Saad
11:00	1197		Design of Iron Oxide Nanoparticles for imaging and active targeting: theranostic in one formulation	RAMIREZ Maria De Los Angeles
11:15	2597		DMSA-Coated Cubic Iron Oxide Nanoparticles as Potential Therapeutic Agents	THANH Nguyen T. K.
11:30	1718		Advances in the mechanistic understanding of iron oxide nanoparticles' radiosensitizing properties	STANICKI Dimitri
11:45	2277		Chemical design of Ga _{0.9} Fe _{2.1} O ₄ system as nanoparticles and thin films	MESAROS Amalia-Zorica

Tuesday May 30

J07

“Drug delivery session” driven by SFNanomedicine french association

Chairperson(s) : DAVIES Gemma-Louise - THANOU Maya

Luxembourg (Ground floor)

13:30	2392	INV	Elastin-like polypeptides-based nanoparticles: strengths and weaknesses for drug delivery applications	GARANGER Elisabeth
14:00	2042		Novel liposomal nanoformulation targeting NLRP3 inflammasome for treating hepatocellular carcinoma: synthesis, characterization, in vitro and in vivo studies	MASTROGIACOMO Rita

14:15	2263		Elaboration of Crystalline Nanoparticles for Theranostic and Drug Delivery Applications	CORVIS Yohann
14:30	2128	INV	Design of a viral-inspired nanoparticle for translational studies in infectiology and cancer	FENDER Pascal
15:00	2129		Magnetic nanoparticles-conjugated E. coli as a potent drug delivery agent for multimodal therapy of pancreatic cancer	KAUR Tashmeen
15:15	1009		Escherichia coli adhesin protein-conjugated thermal responsive hybrid nanoparticles for photothermal and immunotherapy against cancer and its metastasis	HWANG Juyoung
15:30	737	INV	Evolution of Chameleon Nanocarriers: RNA Transfer at Ultra-low Picogram Dose	WAGNER Ernst

Tuesday May 30

J08

Design of theranostic nanoplatforms-2

Chairperson(s) : FENDER Pascal - WAGNER Ernst

Luxembourg (Ground floor)

16:30	944	INV	Near Infrared Emitting Polymer Dots for Bioimaging	ROSENZWEIG Zeev
17:00	1162		mRNA based cytokine delivery	SUN Hongning
17:15	2523		UCNP Based Targeted Imaging of Cancer	CINAR Meric Cansu
17:30	1385		Radical release induced by Magnetothermia	FÉLIX Gautier
17:45	1957		Surface modification of mesoporous silica nanoparticles to enhance colloidal stability for theranostic purposes	HERNANDO ABAD Eduardo
18:00	181		Theranostic NIR/MR Multimodal Amyloid- β Oligomer-Targeted Upconversion Gadolinium-Based Nanoprobe for Alzheimer's Disease	WONG Man Shing

Wednesday May 31

J09

Elaboration strategies of nanoparticles for nanomedicine

Chairperson(s) : CONTEH John Santigie - TIETZE Rainer

Luxembourg (Ground floor)

10:00	1525	INV	Hybrid mesoporous silica nanoplatforms for magnetic hyperthermia, NIR photothermia and drug delivery	MERTZ Damien
10:30	1966		A promising functional Si nanoparticles elaborated by laser method in liquid medium for non-invasive TPE-PDT biomedical applications	AL-KATTAN Ahmed
10:45	923		Controlling the silica shell growth of core-shell iron oxide@ stellate mesoporous silica nanoparticles: effects on MRI, magnetic hyperthermia and NIR-photothermia properties	BIZEAU Joëlle
11:00	2026		Two-cycle Stöber protocol for the tailored synthesis and biotinylation of dual-color Silica Nanosystems for Biomedical Approaches	RAMIREZ-MORALES Maria Antonieta
11:15	2410	INV	Scale-up approach for the preparation of ferrite nanocubes for magnetic hyperthermia application	GAVILÁN Helena
11:45	2685		Facile and scalable synthesis of ultrasmall and fluorescent copper clusters for biomedical application	DI GIROLAMO Alessandro
12:00	2336		Improved 800nm Emission of Upconversion Nanoparticles via Ca-doped NaYF ₄ :Nd,Yb for bio sensing application	SHAHSAVAR GOCMEN Mahla

Wednesday May 31

J10

Continous flow synthesis approaches

Chairperson(s) : DETAPPE Alexandre - MULLER Robert

Luxembourg (Ground floor)

13:30	2373	INV	Thermo-responsive magnetic nanoparticles for anti-cancer drug delivery: from synthesis on bench to a scale-up approach and their applications	CONTEH John Santigie
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14:00	1477		Microwave assisted continuous-flow synthesis of magnetic nanocrystals for metabolites detection	SIMEONIDIS Konstantinos
14:15	2350		A microfluidic photo-induced platform to shape ultrasmall functionalized gold and platinum nanoparticles	MARELLI Marcello
14:30	1323		Continuous flow manufacturing of magnetic nanoparticles using polyol solvents: the Magnified project	VANGIJZEGEM Thomas
14:45	934		Biofunctionalized iron oxide nanoparticles for diagnostic purposes	TIETZE Rainer

Wednesday May 31

J11

Nanoplatforms for imaging 1

Chairperson(s) : GAVILAN RUBIO Helena - MERTZ Damien

Luxembourg (Ground floor)

15:15	1688	INV	Functionalized ultrasmall nanoparticles as multimodal imaging biomarkers	DETAPPE Alexandre
15:45	461	13	Dynamic Metal-Enhanced Fluorescence Microarray for ultrasensitive detection of Neurodegenerative Disease Biomarkers	XIONG Qirong
16:00	364		Nanozymatic magnetic nanomixers for enzyme immobilization and multiplexed detection of metabolic disease biomarkers	LI Di

Wednesday May 31

J12

Nanoplatforms for imaging 2

Luxembourg (Ground floor)

16:30	2688	INV	From Ions to Molecules and Particles, the Saga of Contrast Agents for MRI	MULLER Robert
17:00	1731		Evaluation of oxidative stress in metastatic breast cancer cells using nanodiamond relaxometry	REYES-SAN-MARTIN Claudia
17:15	972		Synthesis of Size-Controlled Cubic Iron Oxide Nanoparticles for MPI-MFH Application	HARVELL--SMITH Stan
17:30	1458		Enhancement of Phosphate Removal in Peritoneal Dialysis using designed magnetic Iron Oxide Nanostructures.	LUCANTE Theo

17:45

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Green-light responsive Carbon based
nanosystems for chemo-photothermal
combined anticancer therapy.

PETRALIA Salvatore

