



## Conference program, Room overview

<b>Sunday June 17<sup>th</sup></b>			
19h-21h	Registration and drinks		
<b>Monday June 18<sup>th</sup></b>			
8h30-9h15	Registration		
9h15u-9h35	Opening ceremony, Room Rafter		
9h35-10h20	Plenary 1, Room Rafter		
10h25-11h10	<table border="1"> <tr> <td>Room Rafter Nanomaterials-Nanotechnology</td> <td>Room Vermeylen Energy related materials</td> </tr> </table>	Room Rafter Nanomaterials-Nanotechnology	Room Vermeylen Energy related materials
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11h10-11h30	Flash poster presentation, Room Rafter		
11h30-13h	Lunch and poster Session 1, Kapittelzaal		
13h-13h35	Keynote 1, Room Rafter		
13h40-14h45	<table border="1"> <tr> <td>Room Rafter Functional materials</td> <td>Room Vermeylen Materials processing</td> </tr> </table>	Room Rafter Functional materials	Room Vermeylen Materials processing
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14h45-15h15	Coffee break, Kapittelzaal		
15h15-15h50	Keynote 2, Room Rafter		
15h55-17h	<table border="1"> <tr> <td>Room Rafter Cement/ gypsum and lime</td> <td>Room Vermeylen Environment-related materials</td> </tr> </table>	Room Rafter Cement/ gypsum and lime	Room Vermeylen Environment-related materials
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18h	Welcome reception , City Hall		
<b>Tuesday 19<sup>th</sup></b>			
8h30-9h15	Plenary 2, Room Rafter		
9h20-10h25	<table border="1"> <tr> <td>Room Rafter Energy related materials</td> <td>Room Vermeylen Materials processing</td> </tr> </table>	Room Rafter Energy related materials	Room Vermeylen Materials processing
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11h55-12h15	Flash poster presentation, Room Rafter		
12h15-13h45	Lunch and poster session 2, Kapittelzaal		
13h45-14h20	Keynote 3, Room Rafter		
14h25-15h30	<table border="1"> <tr> <td>Room Rafter Sustainability and catalysis</td> <td>Room Vermeylen Environment-related materials</td> </tr> </table>	Room Rafter Sustainability and catalysis	Room Vermeylen Environment-related materials
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15h30-16h00	Coffee break, Kapittelzaal		
16u00-16u35	Keynote 4, Room Rafter		
16h40-18h05	<table border="1"> <tr> <td>Room Rafter Nanomaterials - nanotechnology</td> <td>Room Vermeylen Biomaterials</td> </tr> </table>	Room Rafter Nanomaterials - nanotechnology	Room Vermeylen Biomaterials
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<b>Wednesday 20th</b>			
8h30-9h15	Plenary 3, Room Refter		
9h20-10h25	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Room Refter Cement/ gypsum and lime</td> <td style="width: 50%; text-align: center;">Room Vermeylen Composites and Materials processing</td> </tr> </table>	Room Refter Cement/ gypsum and lime	Room Vermeylen Composites and Materials processing
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12h00-12h40	Lunch, Kapittelzaal		
Excursion to Bruges and Conference Banquet			

<b>Thursday 21th</b>			
8h30-9h15	Plenary 4, Room Refter		
9h20-10h55	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">Room Refter Sustainability and catalysis</td> <td style="width: 50%; text-align: center;">Room Vermeylen Functional and environment related materials</td> </tr> </table>	Room Refter Sustainability and catalysis	Room Vermeylen Functional and environment related materials
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12h30	Closing Ceremony		



**Programme: Monday 18<sup>th</sup> June**  
**Room Refter**

9h15-9h35	Opening ceremony		
Nanomaterials- nanotechnology session Chairman: Isabel Van Driessche			
9h35-10h20	Plenary	<b>Zeger Hens</b>	Colloidal semiconductor nanocrystals, a new material class for printed photonics
10h25-10h50	Invited	<b>Takamasa Ishigaki</b>	Enhanced visible light photocatalytic activity of high concentration Nb doped TiO <sub>2</sub> given by high-temperature heat treatment
10h50-11h10		<b>Eiichi Kondoh</b>	Nanogap/pore fill with wide bandgap material using supercritical fluids aiming at realizing p-Si based LEDs
11h10-11h30	Flash poster presentation Chairman: Klaartje De Buysser		
Functional materials session Chairman : Kyoshi Itatani			
13h-13h35	Keynote	<b>Markus Niederberger</b>	Nanoparticle Synthesis and Assembly for Energy Storage and Conversion
13h40-14h05	Invited	<b>Rémy Boulesteix</b>	Rare-earth oxides transparent ceramics for high power laser applications
14h05-14h25		<b>Shinnosuke Kamei</b>	Synthesis of a Novel Wavelength Conversion Phosphor Film for Solar Panels
14h25-14h45		<b>Yuta Matsushima</b>	A new phosphor host material aluminium lithium fluoride oxide for deep-red phosphors with Fe <sup>3+</sup> and Mn <sup>4+</sup> luminescent centres
Cement/ gypsum and lime session Chairman: Hiroyuki Sango			
15h15-15h50	Keynote	<b>Yoshiyuki Kojima</b>	Character control of calcium compounds by liquid-phase reaction
15h55-16h20	Invited	<b>Nele De Belie</b>	Comparison of Reactivity tests on Pozzolanic Materials
16h20-16h40		<b>José Ramón Jiménez</b>	Effects of biomass fly ash and mixed recycled aggregates on the mechanical properties of masonry mortar
16h40-17h00		<b>Kazumichi Yanagisawa</b>	Development of novel technique to decompose hydrofluorocarbons by the reaction with quicklime



**Programme: Monday 18<sup>th</sup> June**  
**Room Vermeulen**

Energy related materials session Chairman: John Kilner			
			<i>The lecture of Dr. Kimura is rescheduled to Thursday 11h15</i>
10h50-11h10		<b>Anthony Maho</b>	Insight into electrical properties damaging with quenching of the F:SnO <sub>2</sub> layers
Materials Processing session Chairman : Toshinori Okura			
13h40-14h05	Invited	<b>Yoshio Sakka</b>	Pulsed electro-discharged pressure sintering and Flash sintering
14h05-14h25		<b>Tohru Suzuki</b>	Fabrication of transparent crystalline oriented alumina by a slip casting in a magnetic field followed by SPS
14h25-14h45		<b>Tetsuo Uchikoshi</b>	Surface Modification of SiAlON Phosphor for Obtaining Dense, Homogeneous Layer by Electrophoretic Deposition
Environment-related materials session Chairman : Frans Snijkers			
15h55-16h20	Invited	<b>Chiharu Tokoro</b>	Immobilization mechanism of toxic anions at the solid/liquid interface of ferrihydrite
16h20-16h40		<b>Ilona Oja Acik</b>	TiO <sub>2</sub> thin films as efficient photocatalytic material for air purification
16h40-17h00		<b>Kohei Suzuki</b>	The removability of Cd by $\delta$ -MnO <sub>2</sub> prepared by a novel two-steps reaction



**Programme: Tuesday 19<sup>th</sup> June**

**Room Reffer**

Energy related materials session Chairman: Motohide Matsuda			
8h30-9h15	Plenary	<b>John Kilner</b>	Mixed Ionic Electronic Conductors for High Temperature Electrochemical Devices
9h20-9h45	Invited	<b>Bartlomiej Glowacki</b>	Nano-functionalization of ceramic materials via inkjet printing
9h45-10h05		<b>Toshinori Okura</b>	Synthesis and Na <sup>+</sup> conduction properties of rare earth-free Narpzio glass-ceramics
10h05-10h25		<b>Mireille Richard-Plouet</b>	Nanostructured transition metal oxides: thin films by chemical and physical routes
Functional materials session Chairman : Klaartje De Buysser			
10h50-11h15	Invited	<b>Errki Levänen</b>	Functional ceramic materials by sustainable scCO <sub>2</sub> processing
11h15-11h35		<b>Kentarou Mori</b>	Effect of Eu <sup>3+</sup> ion on luminescence properties of SrAl <sub>12</sub> O <sub>19</sub> phosphor
11h35-11h55		<b>Jonathan Watté</b>	Synthesis and thin film deposition of scratch-resistant hybrid silica coatings with an increased flexibility
11h55-12h15	Flash poster presentations		
Sustainability and catalysis session Chairman : Steven Nolan			
13h45-14h20	Keynote	<b>Oliver Kappe</b>	The Use of Continuous Flow Technology for the Synthesis of Active Pharmaceutical Ingredients
14h25-14h50	Invited	<b>Takahiro Takei</b>	Adsorption behaviour of rare earth metal cations in phosphate-containing inorganic adsorbents
14h50-15h10		<b>Nicole Meulendijks</b>	Synthesis of nanoparticles in dispersion: Flow cell coupled analytics as a way to follow particle growth
15h10-15h30		<b>Lionel Tinat</b>	Microwave continuous flow syntheses of nanomaterials for catalytic and photocatalytic applications
Nanomaterials- nanotechnology session Chairman: Isabel Van Driessche			
16h00-16h35	Keynote	<b>Fabien Grasset</b>	From Colloidal Chemistry to New Nanocomposites Materials for Biomedical, Optical, Energy and Environmental Applications
16h40-17h05	Invited	<b>Iwan Moreels</b>	Toward continuously tunable emission spectra of 2D nanomaterials
17h05-17h25		<b>Marion Bourebrab</b>	Enhanced water resistance and fire performance of bio-based insulation materials via silica particles treatment
17h25-17h45		<b>Pieter Schiettecatte</b>	The surface of colloidal molybdenum disulfide nanosheets
17h45-18h05		<b>Hirobumi Shibata</b>	Preparation of Zinc Oxide single crystal particles using amphiphiles as crystal growth directing agents



**Programme: Tuesday 19<sup>th</sup> June**  
**Room Vermeulen**

Materials processing session Chairman: Tetsuo Uchikoshi			
9h20-9h45	Invited	<b>Kenjiro Fujimoto</b>	Materials innovation using combinatorial processing and high-throughput measurement system
9h45-10h05		<b>Jef Bergmans</b>	Recycling of spent Cu-based oxygen carriers into high-strength ceramic
10h05-10h25		<b>Juha-Pekka Nikkanen</b>	Utilization of CO <sub>2</sub> in modification of galvanized steel surface
Sustainability and catalysis session Chairman : Oliver Kappe			
10h50-11h15	Invited	<b>Pascal Van Der Voort</b>	Hybrid Materials for Sustainability
11h15-11h35		<b>Fransesc Sastre-Calabuig</b>	CO <sub>2</sub> photoassisted methanation on Ru supported Al <sub>2</sub> O <sub>3</sub> under solar light irradiation
11h35-11h55		<b>Carlos Mendoza</b>	Rose Bengal@MSNs as heterogeneous photocatalysts in photooxygenation reactions
Environment-related materials Chairman: Yoshikazu Kameshima			
14h25-14h50	Invited	<b>Kazuya Nakata</b>	Biological applications of photocatalysis
14h50-15h10		<b>Daniela Meroni</b>	Structural and ran properties of N-doped TiO <sub>2</sub> /SnO <sub>2</sub> photocatalysts for air pollutant remediation
15h10-15h30		<b>Giuseppe Granata</b>	Removal Mechanism of Se(IV) and Cr(VI) from Aqueous Solution by Sulfate Green Rust
Biomaterials session Chairman: Hirotaka Maeda			
16h40-17h05	Invited	<b>Kimihiko Yamashita</b>	Introduction of hydroxyapatite electret for novel biointerface engineering
17h05—17h25		<b>Sander Leeuwenburgh</b>	Reinforcement of bioceramics with polymeric particles to obtain self-healing and tough polymer-ceramic composite biomaterials



**Programme: Wednesday 20<sup>th</sup> June**

**Room Rafter**

Cement / Gypsum and lime session Chairman: Nele De Belie			
8h30-9h15	Plenary	<b>Shigeru Takahashi</b>	Recent outline of cement industry in Japan
9h20-9h45	Invited	<b>Seiichi Hoshino</b>	Environmental contribution assessment of recyclable resources utilization in cement
9h45-10h05		<b>Philip Van den Heede</b>	Accelerated and natural carbonation of concrete with high volumes of fly ash: chemical, mineralogical and microstructural effects
10h05-10h25		<b>Tomasz Stawski</b>	Revealing <i>in situ</i> the role and the structure of $(Ca-SO_4)_n$ nanorods, the basic building units of gypsum crystals
Functional materials session Chairman : Erkki Levänen			
10h50-11h15	Invited	<b>Kenji Uchino</b>	Piezoelectric Energy Harvesting Systems
11h15-11h35		<b>Naohiro Horiuchi</b>	Hydroxyapatite electret preparation using proton conductivity
11h35-11h55		<b>Anna Prnová</b>	HP sintering of $Al_2O_3$ - $Y_2O_3$ glass microspheres

**Room Vermeulen**

Composites and Materials processing session Chairman: Naofumi Uekawa			
9h20-9h45	invited	<b>Katsumi Yoshida</b>	Mechanical properties of SiC fiber-reinforced SiC composites with carbon interphase formed by electrophoretic deposition method
9h45-10h05		<b>Ondrej Hanzel</b>	SiC-graphene composites with high thermal and electrical conductivity
10h05-10h25		<b>Laurent Boilet</b>	Optical and dielectric properties of $BaTiO_3$ ceramics prepared by Spark Plasma Sintering
Energy related materials session Chairman : Bartłomiej Glowacki			
10h50-11h10		<b>Timo Bartsch</b>	Impact of cathode material particle size and external pressure on cycling performance of all-solid-state batteries
11h10-11h30		<b>Reinert Verstraete</b>	Stable Red Fluoride Phosphors for White LEDs
11h30-11h50		<b>Motohide Matsuda</b>	Magnetic Orientation Control of Layered Ni-based Compounds for Solid Oxide Fuel Cell



**Programme: Thursday 21<sup>st</sup> June**

**Room Rafter**

<b>Sustainability and catalysis session</b>			
Chairman: Takahiro Takei			
8h30-9h15	Plenary	<b>David Cole Hamilton</b>	The Catalytic Production of Chemicals from Waste Bio - Oils
9h20-9h45	Invited	<b>Steven Nolan</b>	Easy access to metal-N-heterocyclic carbene catalysts
9h45-10h05		<b>Aleksey Vedyagin</b>	Catalytic synthesis of segmented carbon filaments via decomposition of chlorinated hydrocarbons on Ni-Pt alloys
10h05-10h25		<b>Catherine Cazin</b>	Unusual Cu-dimers: Outstanding catalysts in hydrosilylation and mechanistic investigations
10h25-10h55		<b>Yoran De Vos</b>	Iron based oxygen carriers for hydrogen production - improved long term stability and in-situ time-resolved investigation
<b>Structural materials and nanomaterials session</b>			
Chairman : Fabien Grasset			
11h15-11h40	Invited	<b>Shunsuke Hanehara</b>	Research on mechanism of deterioration of concrete by salt scaling by use of new evaluation method
11h40-12h00		<b>Jonas Billet</b>	Rational Design and Surface Chemistry of Size-Tuneable TiO <sub>2</sub> -B Nanocrystals
12h00-12h20		<b>Steve De Pooter</b>	Silica aerogel powder synthesis for thermal insulation in buildings

**Room Vermeulen**

<b>Functional and environment related materials</b>			
Chairman: Dirk Poelman			
9h20-9h40		<b>Olivier De Clercq</b>	Trap structure in the NIR persistent phosphor LiGa <sub>5</sub> O <sub>8</sub> :Cr <sup>3+</sup>
9h40-10h00		<b>Hiroaki Onoda</b>	Low temperature phosphoric acid treatment of zinc oxide for novel white pigment
10h00-10h20		<b>Masamoto Tafu</b>	Effect of gypsum on reaction of dicalcium phosphate dihydrate (DCPD) with fluoride ions
10h20-10h50		<b>Ameni Gharzouni</b>	Geopolymers: importance of raw materials reactivity
<b>Energy related materials session</b>			
Chairman: Dirk Poelman			
11h15-11h45	Invited	<b>Takeshi Kimura</b>	Preparation of All Solid State Battery with LLZO Solid Electrolyte