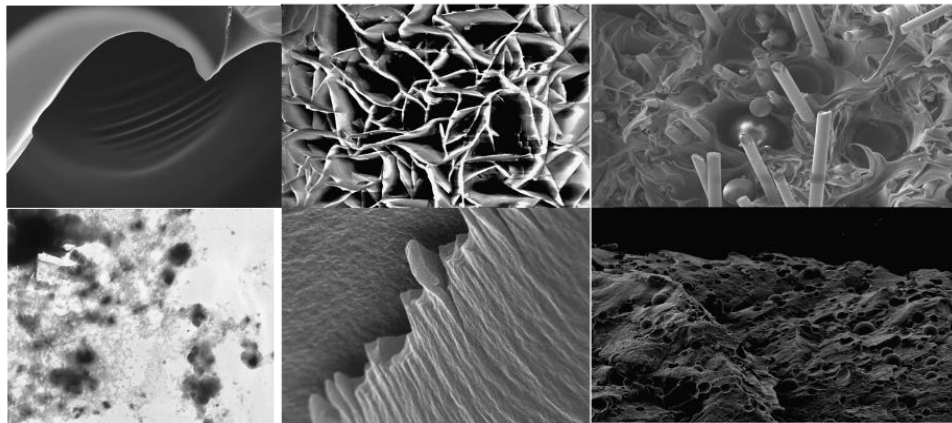


# NANOSTRUC 2018

International Conference on Structural Nano Composites  
23<sup>rd</sup> - 24<sup>th</sup> May 2018, Berlin Germany



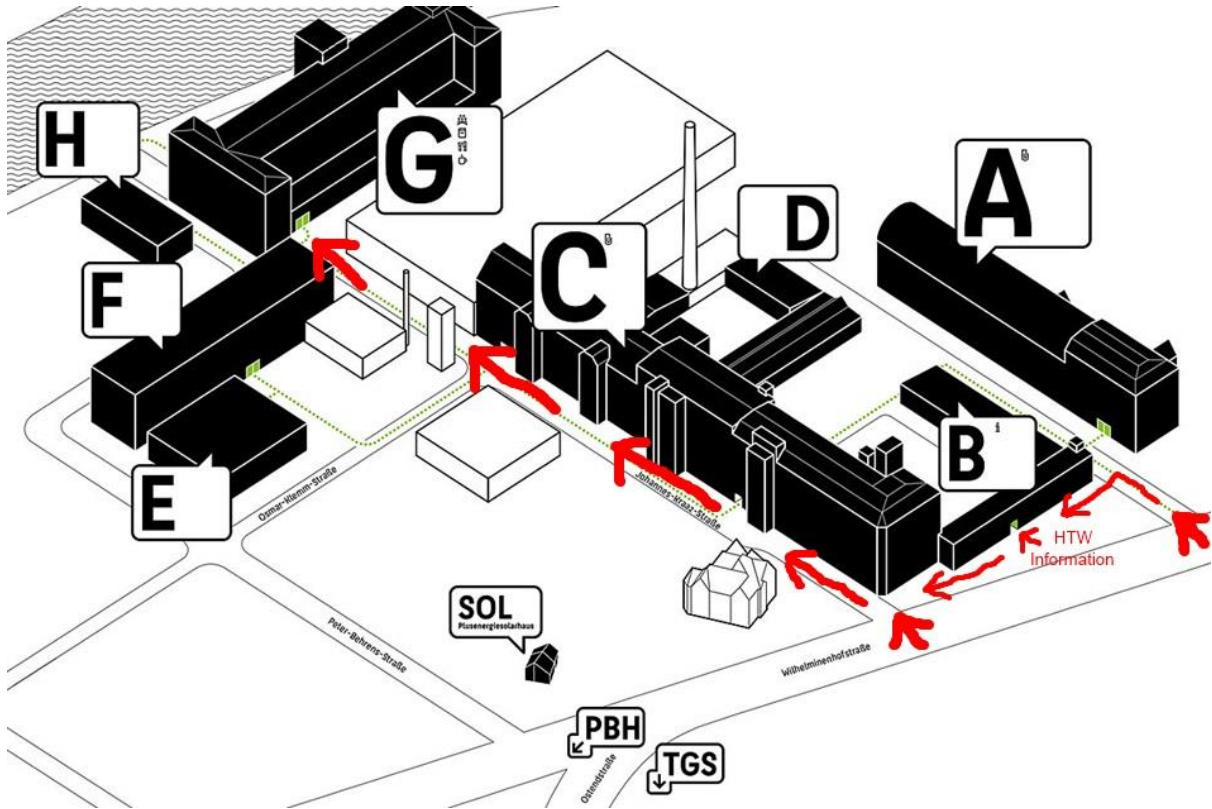
## Conference Programme



**Hochschule für Technik  
und Wirtschaft Berlin**

*University of Applied Sciences*

# HTW Campus - Building Map

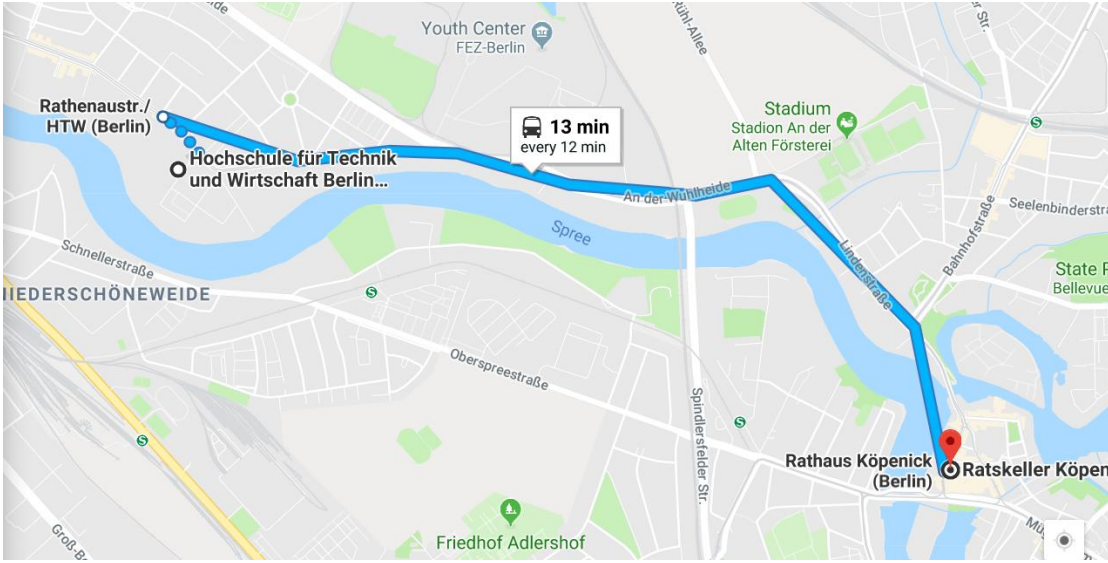


*fibers*

**WILEY**

## Wednesday 23<sup>th</sup> May 2018

08:00 – 09:00	<b>Registration (Room G007/008)</b>	
09:00- 09:15	<b>Welcome (Room G001)</b>	
	<b>Session 1.1: Keynote 1 (Room G001)</b>  Chair- <i>Ha-Duong Ngo</i>	
09:15- 09:55	<b>Optical grating technology</b>  <i>Marcus Lörger</i>	
09:55 -10:30	<b>Smart electrically conductive polymeric nanocomposites</b>  <i>Matej Mičušík, Eliška Číková and Mária Omastová</i>	
10:30- 11:00	<b>Coffee/Tea Break (Room G007/008)</b>	
	<b>Session 1.2: Automotive and Aerospace Materials (Room G001)</b>  Chair - <i>Sérgio Henrique Pezzin</i>	<b>Session 1.3: Nanosensors (Room H001)</b>  Chair – <i>Mária Omastová</i>
11:00- 11:30	<b>Reduced order modelling for complex, time dependent and multi-scale modelling</b>  <i>Kambiz Kayvantash</i>	<b>Synthesis and applications of monolithic quasi 1D metal-semiconductor nanowire heterostructures</b>  <i>Alois Lugstein</i>
11:30- 11:50	In situ mechanical synthesis of Al-Ti nanointermetallic reinforcements in AA 5052 alloy  <i>Jairo Barauna and Rodnei Bertazzoli</i>	CNT-based sensors for strain monitoring/sensing applications  <i>Ana Santos, Luís Amorim, João Pedro Nunes, Luís Rocha, Alexandre Silva and Júlio Viana</i>
11:50- 12:10	Processing and yield strength increase of an AM60-Based metal matrix nanocomposite (MMNC)  <i>Hajo Dieringa</i>	Structural, Morphological and Optical Properties of BaSnO <sub>3</sub> films prepared by pulsed laser ablation  <i>Jibi John, Radhakrishna Prabhu and V.P.Mahadevan Pillai</i>
12:10- 12:30	Thermal diffusivity behaviour of multi-walled carbon nanotube reinforced Ti6Al4V metal matrix composites  <i>Adewale Adegbenjo, Babatunde Obadele, Peter Olubambi, Mxolisi Shongwe and Samuel Adejuwon</i>	Synthesis, structural and morphological property of a novel Pd/g-CN nano composite for gas sensing application  <i>Arif Ibrahim, Uzma Bano Memon, S P Dutttagupta, J Praveen Kumar, A Sarkar and R K Singh Raman</i>
12:30- 13:00	<b>The role of the acetalization degree on the dynamical mechanical properties of polyvinylbutyral nanocomposites</b>  <i>Sergio Pezzin and Jean Hoepfner</i>	<b>Nanosilicon as a material for sensors and thermoelectrics</b>  <i>Androula G. Nassiopoulou and Manolis Hourdakias</i>
13:00- 14:00	<b>Lunch &amp; Posters (Room G007/008)</b>	

	<p><b>Session 1.4: Keynote 2 (Room G001)</b></p> <p>Chair – <i>Fengge Gao</i></p>
<p>14:00-14:40</p>	<p><b>Functional bionanocomposites prepared through cellulose mineralization</b></p> <p><i>Yury Shchipunov</i></p>
<p>14:40-15:10</p>	<p><b>Functional polymer-based nanocomposite fibers via electrospinning</b></p> <p><i>Theodora Krasia-Christoforou</i></p>
<p>15:10-15:40</p>	<p><b>Numerical approaches in the study of hybrid nanofluids and their possible applications in solar energy</b></p> <p><i>Alina Adriana Minea</i></p>
<p>15:40-17:00</p>	<p><b>3 mins Poster Presentation (for Each Poster)</b></p> <p style="text-align: right;"><b>WILEY</b></p>
<p>17:00</p>	<p style="text-align: center;"><b>Posters and Coffee/Tea Break (Room G007/008)</b></p>
<p>19:30</p>	<p style="text-align: center;"><b>GALA DINNER</b></p> <p style="text-align: center;">Ratskeller Köpenick Alt-Köpenick 21, 12555 Berlin, Germany</p> 
	<p style="text-align: center;"><b>END OF DAY 1</b></p>

**Thursday 24<sup>th</sup> May 2018**

	<b>Session 2.1: Keynote Lectures (Room G001)</b>	
	Chair - <i>Raquel Verdejo</i>	
09:00-09:45	<b>Preparation and characterisation of cellulose nanocrystals for bio-based polyamide reinforcement</b> <i>Agnieszka Leszczyńska, Paulina Radzik and Krzysztof Pielichowski</i>	
09:45-10:30	<b>Problems with the current filler-reinforced nanocomposite technology and their solutions</b> <i>Fengge Gao, Isaiah Fasanya and Carl Brown</i>	
10:30 - 11:00	<b>Posters &amp; Coffee/Tea Break (Room G007/008)</b>	
	<b>Session 2.2: Hybrid Composites (Room G001)</b>	<b>Session 2.3: Biomaterials and Biomedical devices (Room H001)</b>
	Chair - <i>Theodora Krasia-Christoforou</i>	Chair – <i>Radhakrishna Prabhu</i>
11:00-11:30	<b>Carbon nanoparticles for epoxy hierarchical composites</b> <i>Rubén Sánchez-Hidalgo, Vanesa Yuste-Sanchez, Mónica Peñas-Caballero, Luciana Lescano, Marianella Hernández, Miguel A. Lopez-Manchado, Raquel Verdejo</i>	<b>3D arranged reduced graphene oxide – polyethylene glycol – amine based biosensor platform for super-sensitive detection of procalcitonin</b> <i>Niels Grabbert, Markus Fiedler, Vera Meyer, Leopold Georgi, Katrin Hoepfner, Marc Ferch, Krystan Marquardt, Erik Jung, Piotr Mackowiak, Ha-Duong Ngo and Klaus-Dieter Lang</i>
11:30-11:50	Influence of graphene oxide on mechanical and hydrophilic properties of epoxy/banana fiber composites <i>Preetam Bharadiya, Mukesh Singh and Satyendra Mishra</i>	Investigations on sensitivity enhancement of SPR biosensor using tunable wavelength and graphene layers <i>Kaushalkumar Bhavsar and Radhakrishna Prabhu</i>
11:50-12:10	Flexural and compression strength properties of novel Polyamide 6 nanocomposite materials <i>Urenna V. Adegbotolu, Krzysztof Pielichowski, Agnieszka Leszczyńska, Thomsz Majak, James Njuguna</i>	Mechanical structural design of a MEMS-based piezoresistive accelerometer for head injuries monitoring: A computational analysis by increments of the sensor mass moment of inertia <i>Marco Messina</i>
12:10-12:30	Material configuration in the Die, influences of pultrusion process parameters and part properties <i>Arindam Mukherji</i>	Nanoparticle emissions due to automated drilling on epoxy, polyester and polypropylene based nanocomposites <i>Kristof Starost, Evelien Frijns, Jo Van Laer, Nadimul Faisal, Ainhoa Egizabal, Cristina Elizextea, Inge Nelissen, James Njuguna, Maria Blazquez</i>
12:30-13:30	<b>Lunch &amp; Posters (Room G007/008)</b>	

	<p><b>Session 2.4: Functional Nanocomposites (Room G001)</b></p> <p>Chair – <i>Krzysztof Pielichowski &amp; Alina Adriana Minea</i></p>
13:30-13:50	<p>A correlation between nano and micro-hardness properties of TiN nanoparticles strengthened SAF 2205</p> <p><i>Mahlatse Mphahlele, Samuel Oke, Oladeji Ige, Oluwasegun Falodun, Babatunde Obadele, Peter Olubambi and Mxolisi Shongwe</i></p>
13:50-14:10	<p>Erbium modified titania decorated MWCNT Nanocomposite: A visible light driven photocatalyst for the decolourisation of Reactive Red 120</p> <p><i>Diseko Boikanyo, Ajay Kumar Mishra, Shivani Bhardwaj Mishra and Sabelo Dalton Mhlanga</i></p>
14:10-14:30	<p>Effect of graphite addition on the tribological properties of pure titanium carbonitride (TiCN) prepared by spark plasma sintering</p> <p><i>Gadifele Mekgwe, Peter Olubambi, Babatunde Obadele, Thabiso Langa and Jeremiah Akinribide</i></p>
14:30-14:50	<p>Temperature effect on the mechanical characteristics of niobium nitride thin films</p> <p><i>Violeta Merie, Marius Pustan, Gavril Negrea, Corina Birleanu and Florina Șerdean</i></p>
14:50 – 15:10	<p>Analysis of humidity influence on adhesion and tribological properties of niobium nitride thin films</p> <p><i>Florina Șerdean, Marius Pustan, Violeta Merie, Corina Birleanu and Horea Crișan</i></p>
15:10-15:40	<p><b>Structural, Morphological and Optical Properties of BaSnO<sub>3</sub> films prepared by pulsed laser ablation</b></p> <p><i>Jibi John, Radhakrishna Prabhu and V.P.Mahadevan Pillai</i></p>
15:40 – 16:00	<p><b>POSTER AWARDS &amp; CLOSURE (Room G001)</b></p>
16:00–17:00	<p><b>LAB VISIT: FRAUNHOFER IZM (THE FRAUNHOFER INSTITUTE FOR RELIABILITY AND MICROINTEGRATION)</b>  <a href="http://www.izm.fraunhofer.de/en.html">www.izm.fraunhofer.de/en.html</a></p>
	<p><b>END OF DAY 2</b></p>

**Friday 25<sup>th</sup> May 2018**

10:00 - 11:30	<p><b>LAB VISIT: HELMHOLTZ-ZENTRUM BERLIN FACILITIES</b></p> <p><a href="https://www.helmholtz-berlin.de/index_en.html">https://www.helmholtz-berlin.de/index_en.html</a></p>
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