

Realtime Nanoparticle Measurements



an introduction to PAT4Nano:

solving industrial needs using innovative solutions.

Tuesday 24th of November 2020

From 3PM (UTC)

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Join Webinar

The PAT4Nano consortium is pleased to host this introductory webinar about online nanoparticle measurements and multi-PAT solutions for nanomaterial production. The aim of this web conference is to bring together scientists, researchers, engineers, and industry to share their experience, gain and evaluate emerging technologies in nanosuspension and nanoparticle analysis across the globe.



About PAT4Nano: PAT4Nano offers an integrated, end user-driven approach to develop and deploy different, yet complementary particle size measurement technologies for in- and online real-time monitoring. These will quantify particle size distribution and chemical composition in nanosuspensions. PAT4Nano will focus on applications in pharmaceuticals, inks/pigments, and materials for catalysis, batteries, and glass manufacture. Continuous, rapid, and reliable real-time data from PAT4Nano tools will provide more comprehensive process information than current offline measurements enabling manufacturers to obtain insights into the fundamental dynamics of nanoparticle-based processes.

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Time	Online Nanoparticle Measurements: <i>an introduction to PAT4Nano.</i>	
Welcome address		
3:00 to 3:20	INTRODUCTION TO PAT4NANO Prof. Alan Ryder, NUI Galway	 <p><i>Alan Ryder is a personal professor at the School of Chemistry and directs the Nanoscale Biophotonics Laboratory. He is co-ordinating the PAT4Nano project and developing multi-PAT approaches to nanoparticle sizing and characterisation. His other research involves the use of spectroscopy and multivariate data analysis to analyse a wide variety of materials including complex biopharmaceuticals.</i></p>
Plenary lecture		
3:30 to 3:55	NANOMATERIALS AND NANOPARTICLES DETECTION AND CHARACTERISATION Denis Koltsov, BREC Solutions Limited.	 <p><i>Dr Denis Koltsov worked as a research associate in Cambridge Nanoscience Centre before taking up lecturing position at Lancaster University in 2005 where he led nanotechnology work and outreach services till 2009. Dr Koltsov is now running his own nanotechnology consulting practice (BREC Solutions limited) that focuses on technical, regulatory and standardisation issues nanotechnology innovation. Dr Koltsov is an expert representing industry on BSI, ISO, IEC and CEN expert committees. Dr Koltsov developed and published a number of international nanotechnology standards and currently holds the chairman position for the ISO TC229 (Nanotechnologies). He has conducted a number of industry-led consultations in nanotechnology sector and reported to relevant regulatory authorities. Dr Koltsov was/is a board member on large EU projects such as NanoDefine, NanoReg2, Gracious and international organisations such as National Graphene Association. He advises small startups as well as multinationals, international organisations and governments.</i></p>
Current Technologies and beyond for real-time nanoparticle analysis.		
4:00 to 4:20	SPATIALLY RESOLVED LIGHT SCATTERING METHODS: ADDING A NEW DIMENSION Ad Gerich, IP-LSP	 <p><i>Ad Gerich co-founded InProcess-LSP in 2014, a company specialized in Process Analytical Technology (PAT) solutions with a strong focus on Pharmaceutical Industry. He worked for 20 years in pharmaceutical development at various positions varying from analytical chemistry researcher to Director of Product Development within Merck. Ad was involved in development and implementation of many PAT projects in R&D and commercial manufacturing and is now general manager of InProcess-LSP.</i></p>
4:25 to 4:45	LASER DIFFRACTION FROM THE MICRON TO THE NANO SCALE Steve Ward-Smith / Tina Rowney, Malvern Panalytical	 <p><i>Dr Steve Ward-Smith has been with Malvern Panalytical for over 25 years in a variety of roles but is now part of the pharmaceutical and food sector looking after large global customers. He is also part of ISOTC24 SC4 which covers standardisation in materials characterisation methods and chair of ISO TC281 in Fine Bubble Technology.</i></p>

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Time	<u>Online Nanoparticle Measurements: an introduction to PAT4Nano.</u>	
4:50 to 5:00	Virtual Coffee break	
Future online nanoparticle technologies		
5:00 to 5:20	UNPS – ULTRASONIC NANO PARTICLE SIZER BY MEANS OF ONLINE ULTRASOUND SPECTROSCOPY Maurits van der Heiden, TNO	 <p>Maurits van der Heiden currently is Senior System Engineer at the Acoustics and Sonar department of TNO. Van der Heiden has an experience of more than 25 years in the development of ultrasonic and optical instrumentation. He has a prime focus on the development of ultrasonic measurement equipment for industrial and medical applications. These innovative measurement concepts are focusing on extreme conditions (extremely small, extremely sensitive, high pressure/temperature).</p>
5:25 to 5:45	INLINE CROSS-CORRELATION DYNAMIC LIGHT SCATTERING Christoph Janzen, Fraunhofer	 <p>Dr. Christoph Janzen has been working as a scientific employee at the Fraunhofer Institute for Laser Technology since 2001. He specialized in the field of Laser measurement technology and has been working as a project leader and a group leader in several scientific projects from fundamental research to applied industrial research with partners from industry and research.</p>
Webinar close		
5:50 to 6:00	Closing Remarks and further information. <i>Alan Ryder, Nanoscale Biophotonics Laboratory, NUI Galway</i>	

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