

Sunday April 23rd 2023		Monday April 24th 2023		Tuesday April 25th 2023		Wednesday April 26th 2023		Thursday April 27th 2023
Short Courses		Session 1	Session 2	Session 1	Session 2	Session 1	Session 2	Polymer Analysis meets Industry
08:30		Registration		Special Sessions in Celebration of Harald Pasch's 70th Birthday				
09:00		Opening ISPAC 2023		Plenary Polymer characterization by interaction chromatography <b>Taihyun Chang</b>		Plenary Chain walking catalysis from the theory point of view: From dendritic to bottle brush molecules <b>Jens-Uwe Sommer</b>		Welcome
09:10		Plenary Polymers Sustainability Considerations <b>Yeng Ming Lam</b>		Keynote Determining accurate molar masses by SEC/MALS using mixed solvents <b>André Striegel</b>		Keynote Pyrolyzable based polymers in advanced polymer materials <b>Rueben Pflukwa</b>		Part 1: SASOL, South Africa
09:30		Keynote Neutron scattering as a powerful probe to characterize soft matter systems <b>Ralf Schweins</b>		Keynote From process to polymeric microstructure – A journey through engineering, modeling & simulation and polymer characterization <b>Markus Busch</b>		Keynote Challenges for Automation of 2D-LC Method Development <b>Bob Pirok</b>		presented by Dr. John Mellor
09:40		Keynote Dendritic polymer integrated nanostructured membranes for water remediation <b>Soraya Malinga</b>		Panel discussion		Panel discussion		Part 2: SABIC, The Netherlands
09:50		Panel discussion						presented by Dr. Anthony Ndiripo
10:00		Break		Break		Break		Part 3: Borealis, Austria
10:10		Keynote Tracking light gated transformations of macromolecules in solution and gas phase via MS <b>Hendrik Frisch</b>		Keynote Polymers for pollutant extraction and separation from water <b>Luke Chimuka</b>		Keynote Quantitative particle analysis by a combination of optical microscopy with FTR and Raman spectroscopy, advanced automation enhanced by Machine learning and data management <b>Dieter Fischer</b>		presented by Dr. Andreas Albrecht
10:20		Keynote Application of MS in polymer industry <b>Chris Kgaје</b>		Keynote How can characterization of biosensing teach us to fabricate better interfaces? <b>Julius Vansco</b>		Keynote Chain-walking Polyethylene: Not a Single Type but a New Family of Polyethylenes <b>Jan Merna</b>		Part 4: BASF, South Africa
10:30		Keynote Investigations on the interaction of nitrogen-based modifiers on the viscosity of alkyl magnesium polymers with MS <b>Julia Schwarz</b>		Bimetallic nanomaterials supported on polymeric nanofiber membranes for removal of PFAS from aquatic matrices <b>Mbuso Didiu</b>		Machine learning of sequence and conformation programming of material properties <b>Marco Werner</b>		presented by Nonhlanhla Sithole
10:40		MS for polymer reaction engineering – monitoring reactivities in multicomponent polyester-based (hybrid) resins <b>Clemens Schwarzwinger</b>		Polymeric gel supports for nanoparticle-assisted water electrolysis <b>Wilhelm H. Le Roux</b>		Analysis of polyolefins (terpolymers) using separation techniques hyphenated with quantitative detection <b>Sampat Singh Bhati</b>		Part 5: DOW Chemical Company, The Netherlands
10:50		Product seminar		Lunch, Poster		Lunch, Poster		presented by Dr. Mubasher Bashir
11:00		Lunch		Lunch, Poster		Lunch, Poster		Lunch
11:10		Keynote Polymers for the isolation of membrane proteins <b>Bert Klumperman</b>		Analysis of UHMW polyacrylamides by AF4: Necessity of low flow rates and Dilution Control Module™ (DCM) <b>Frédéric Violleau</b>		Keynote Comprehensive two-dimensional LC of tannins using HILIC and RPLC: How far can we go? <b>André de Villiers</b>		
11:20		Fabrication of PBS/PBAT-based hybrid system reinforced with lignin and zinc NPs for biomedical applications <b>Asanda Mtibe</b>		Facile fabrication of multifunctional metallic nanostructures: Analysis with novel 3D correlation THFF <b>Upenyu L. Muza</b>		Nanostructure microscopy of polymer systems: thresholds and peculiarities <b>Mikhail Malinin</b>		
11:30		Characterization of stimuli-degradable polymers for triggered drug release <b>Dirk Kuckling</b>		SEC of PEEK in mixture of acidic and chlorosolvents <b>Nicolas Longieras</b>		Kinetic Phenomena in Polymerization Reactions: New Findings and Potential Application <b>Wayne Reed</b>		
11:40		Multiple detection SEC: Understanding the scaling properties of enzymatically crosslinked casein nanoparticles <b>Joshua Johani</b>		Comprehensive analysis of antimicrobial drug delivery systems by integrated characterisation methodologies <b>Zanelle Viktor</b>		Separation and characterization of nanocarrier/Drug Systems based on Polymers and Proteins <b>Gerhard Heinzmann</b>		
11:50		Break		Break		Revisiting KMR: Trends of the Pre-exponential Coefficient K of Branched Polymers in Solution <b>Martin Geisler</b>		
12:00		Novel photoinitiators for design of hybrid smart polymers and materials <b>Terry Steele</b>		Understanding molecular complexity of biodegradable polymer: Comprehensive analysis of aliphatic polyesters <b>Paul Esolem Bungu</b>		Interaction between hydrophilic and hydrophobic polymer blocks causes order-order transition-based thermogelation <b>Anna-Lena Ziegler</b>		
12:10		Molecularly imprinted polymer as an adsorbent for solid-phase extraction of pharmaceuticals from water <b>Sinegugu Khulu</b>		Design and preparation of PLA/PBAT-Fe <sub>3</sub> O <sub>4</sub> -GO@CNC nanocomposite with excellent flame retardancy <b>Lesego Maubane</b>		Novel polymer separations <b>Peter Schoenmakers</b>		
12:20		Structural-function characterization of nanoreactors based on photo-crosslinked polymeric vesicles <b>Silvia Moreno</b>		Degradation of biobased polymers, biopolymer blends and biocomposites under different environmental conditions <b>Sudhakar Muniyasamy</b>		Awards/ Invitation to ISPAC 2024		
12:30		Chemically-sensitive online detection for detection of functional groups: SEC-NMR, HPLC-NMR, SEC-IR(OCL), and FT-IC <b>Manfred Wilhelm</b>		Poster session		Farewell		
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09:30		Registration		Special Sessions in Celebration of Harald Pasch's 70th Birthday				
09:40		Short Course 1: Field Flow Fractionation held by Dr. Martin Geisler and Dr. Upenyu L. Muza (IPF Dresden, Germany)		Plenary Polymer characterization by interaction chromatography <b>Taihyun Chang</b>		Plenary Chain walking catalysis from the theory point of view: From dendritic to bottle brush molecules <b>Jens-Uwe Sommer</b>		
09:50		Short Course 2: Thermal Analysis and Rheology held by Dr. Valerian Hirschberg (KIT, Germany)		Keynote Determining accurate molar masses by SEC/MALS using mixed solvents <b>André Striegel</b>		Keynote Pyrolyzable based polymers in advanced polymer materials <b>Rueben Pflukwa</b>		
10:00		Short Course 3: Mass Spectrometry held by Dr. Hendrik Frisch (QUT, Australia)		Keynote From process to polymeric microstructure – A journey through engineering, modeling & simulation and polymer characterization <b>Markus Busch</b>		Keynote Challenges for Automation of 2D-LC Method Development <b>Bob Pirok</b>		
10:10		Short Course 4: Digitalization in Polymer Analysis held by Dr. Suanne Boye and Dr. Silvia Moreno (IPF Dresden, Germany)		Panel discussion		Panel discussion		
10:20		ISPAC 2023 Welcome Reception		Break		Break		
10:30				Keynote Biobased and biodegradable polymers: Analytical challenge <b>Jana Falkenhagen</b>		Keynote Polymer engineering for electrochemical sensors and biosensors <b>Emmanuel Iwuoha</b>		
10:40				Understanding polymer properties by in depth molecular characterization <b>Peter Kilz</b>		Supersensitive metal free in-situ synthesized graphene oxide@cellulose NCS acetone sensitive biodevised sensors <b>Jonathan Tersur Orasough</b>		
10:50				Separation and characterization of chitosan by SEC and AF4 <b>Yonggang Liu</b>		Electrochemical sensor for detection of aspirin using PEGylated Fe3O4 NPs supported by multidetector AF4 and in-silico studies <b>Lyndon Naidoo</b>		
11:00				SMART thermoresponsive hydrogel films and nanofibres from poly(GMS) grafted amphiphilic copolymers <b>Peter Mallon</b>		Fatigue damage behavior in 3D printed PL composites reinforced by hydroxyapatite, TiO <sub>2</sub> and glassy carbon <b>Karolina Masur</b>		
11:10				Product seminar		Lunch, Poster		
11:20				Lunch		Lunch, Poster		
11:30				Poster session		Lunch, Poster		
11:40				Keynote Polymer separation using NMR as the detector <b>Wolf Hiller</b>		Molecular origin of shear and extensional rheology of polystyrene pom-pom model systems and validation of constitutive models <b>Valerian Hirschberg</b>		
11:50				Hydrodynamic chromatography an efficient tool to determine particle size distributions in the sub-µ range <b>Wolfgang Radke</b>		The effect of post consumer recycles on the rheological extensional viscosity of PE <b>Dickson Motaung</b>		
12:00				Challenges in the characterisation of polyolefin based recycles <b>Andreas Albrecht</b>		Morphology formation during injection molding of semi-crystalline thermoplastics <b>Ines Kühnert</b>		
12:10				Keynote 45 Years of polymer HPLC – A personal account <b>Harald Pasch</b>		Effect of recycling on the properties of PBAT, PBS, PBAT-PBS blend, and PBAT composite <b>Nomvuyo Nomadolo</b>		
12:20				Multidimensional separations <b>Heleen Pflukwa</b>		Characterising the properties and performance of highly filled CaCO <sub>3</sub> masterbatches <b>Lucky Radebe</b>		
12:30				Transportation to conference dinner from STIAS				
12:40				Conference dinner (upon registration)				
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13:00								