Tuesday 30th August 2022

8h45-10h15		**ISOTOPIC LABELLING** **Chair: Maria Paula MARQUES**
	8h45	**Invited speaker: Howbeer MUHAMADALI** Spectroscopic probing of bacterial metabolism at single-cell level
	9h15	**Christophe SANDT** Do Galleria mellonella larvae metabolize polyethylene? An FTIR microspectroscopy study using isotopoic labelling
	9h30	**Giulia GIUBERTONI** Strong isotope-effect on the conformation and self-assembly of collagen
	9h45	**Malgorzata BARANSKA** Labelling endothelial cells with Raman probes improves the specificity and sensitivity of their imaging
	10h00	**Stephan PISSOT*** Rapid antibiotic susceptibility testing using FTIR spectroscopy and deuterium isotope probing
10h15-10h45		**INDUSTRIAL SPONSORS** **Chair : Ali TFAYLI**
	10h15	**ENDRESSHAUSER -KAISER**
	10h25	**METROHM**
	10h35	**OPTON LASER INTERNATIONAL**
10h45-11h15		Coffee break
11h15-12h45		**ENHANCEMENT TECHNIQUES** **Chair: Igor CHOURPA**
	11h15	**Invited speaker: Alois BONIFACIO** Label-free SERS spectra of biological samples: characteristics and potential significance for clinical applications
	11h45	**Petr PRAUS** Magnetron-Sputtered Polytetrafluoroethylene-Stabilized Silver Nano-island Surface for Surface-Enhanced Fluorescence
	12h00	**Bruno TORRE** Hot Electron Nanoscopy and spectroscopy (HENs): from probe design to real applications
	12h15	**Petra HELLWIG** Plasmonic nanostructures for SEIRAS on membrane proteins
	12h30	**Marek PROCHÁZKA** Study of the compactness and permeability of the polymer brushes by surface-enhanced Raman spectroscopy
12h45-14h15		Lunch
14h15-15h30		**BIOMEDICAL APPLICATIONS 2** **Chair: Hugh BYRNE**
	14h15	**Invited speaker: Francesca PALOMBO** Probing tissue biomechanics with chemical specificity in Brillouin-Raman microscopy

	14h45	**Ewelina BIK*** Drug induced phospholipidosis in endothelial cells studied by Raman imaging
	15h00	**Nicolas GOFFIN*** Characterization of cancer-associated adipocytes by Raman spectroscopy
	15h15	**Karolina ŠIŠKOVÁ** Bimetallic Au-Fe(III) nanocomposites for multimodal imaging
15h30-16h00		**INDUSTRIAL SPONSORS** **Chair : Ali TFAYLI**
	15h30	**OPTOPRIM**
	15h40	**PERKINELMER**
	15h50	**PHOTOTHERMAL SCIENTEC**
16h00-16h30		Coffee break
16h30-17h30		**MOLECULAR SPECTROSCOPY 2** **Chair: Susan QUINN**
	16h30	**Invited speaker: Sébastien BONHOMMEAU** Tip-enhanced Raman spectroscopy for nanoscale chemical and structural characterization of biomolecules
	17h00	**Monica MARINI** Background-free DNA-protein interactions: structural insights by Raman spectroscopy
	17h15	**Stepan JILEK*** Raman optical activity as a potent tool for studies of mononucleotide G-quadruplexes
17h30-18h15		**FLASH PRESENTATIONS** **Chair: Francesca PALOMBO and Agnieszka BANAS**
		Almar AL ASSAAD* Monitoring of the accumulation of Squalene-Gemcitabine nanomedicine within single living breast cancer cell by Raman imaging
		Ohood ALSHAREEF* Single Cell FTIR Imaging with Novel ZnS Hemispheres for Studying Phospholipidosis in Live Macrophages
		Karolina AUGUSTYNIAK* Early detection of stem cells transformation using FTIR and High-Resolution Raman Imaging
		Uladzislau BLAZHKO SIMIECORR: Mie scatter correction without a prior assumption about the chemical composition of a sample
		Arianna BONIZZI* Identification of a biochemical signature of dysfunctionality by Raman spectroscopy analysis of lipoproteins
		Annalisa CARRETTA* From synthetic identity to biological function of a doxorubicin liposomal formulation

Gary COONEY*
Tip-Enhanced Raman Spectroscopy of Tau fibrils: Measurement and Chemometric Analysis

Markéta FOUSKOVÁ
Raman Spectroscopy in the Early Diagnosis of Colorectal Cancer

Francesca GASPARIN*
Live-cell Mid-infrared Optoacoustic Microscopy and Spectroscopy for Longitudinal Metabolic Monitoring

Philip GASSE*
Two-dimensional infrared spectroscopy of carbohydrates with site-specific reporter groups

Pooja GIRISH*
Spectral tissue imaging for ex-vivo cancer diagnosis and survey

Julien GUILLARD*
FTIR spectral imaging analysis of cirrhosis development in two murine models

Mahmoud HULEIHEL
Infrared Spectroscopy in Tandem with Machine Learning for Simultaneous Rapid Identification of Bacteria Isolated Directly from Patients' Urine Samples and Determination of Their Susceptibility to Antibiotics

Maria KRAJAČIĆ*
Artificial Neural Network and Support Vector Machine Regression for Forensic Age Determination Using Raman Spectra of Teeth

Chen LIU*
Raman-based Detection of Antibiotics in Pharmaceutical Formulations and Biological Matrices

Shibarjun MANDAL*
Bacteria localization in hematogenous osteomyelitis using fluorescence and Raman imaging

Nathan MEYER*
Detection of Aβ 1-42 aggregates by RT-FAST: toward a new tool for the diagnostic of Alzheimer's disease

Pierre NIZET*
Assessment of Ovarian Tumor Growth in Wild-Type and Lumican-Deficient Mice: Insights Using Infrared Spectral Imaging, Histopathology, and Immunohistochemistry

Imane OUDAHMANE*
Vibrational spectroscopy applied on biofluids: infrared spectroscopy for bladder cancer diagnosis using urine samples

Ayyoub RAYYAD*
Analytical quality control of therapeutic mAbs preparations by Raman spectroscopy

José Javier RUIZ*
Identification and biochemical characterization of breast cancer cells resistant to neoadjuvant treatment by Raman Spectroscopy

Oliva SALDANHA
Calcium induced vesicular interactions studied with ATR- FTIR spectroscopy

František ŠANDA
Lineshape analysis of 2D spectra for fifth order spectroscopies: exciton transport, annihilation and spectral diffusion dynamics

Till STENSITZKI
High-throuput 2D-IR spectroscopy using the HARE chip

Laurence VAN GULICK
Effects of obesity on the structural organization and mechanical properties of type I collagen

Clara WATTIEZ*
Determining the influence of H/D exchange on IR spectroscopy and vibrational dynamics of polypeptide secondary structures

Martina ZANGARI*
The role played by protein-asbestos fiber interaction in asbestos pathogenicity

18h15-20h45 **POSTER SESSION – WINE AND CHEESE**

1. **Samar ADAWI***
   Using FTIR-ATR spectroscopic method to monitor the development of fungi in plants and bread
2. **Almar AL ASSAAD***
   Monitoring of the accumulation of Squalene-Gemcitabine nanomedicine within single living breast cancer cell by Raman imaging
3. **Ohood ALSHAREEF***
   Single Cell FTIR Imaging with Novel ZnS Hemispheres for Studying Phospholipidosis in Live Macrophages
4. **Ali ASSAF**
   Monitoring of algal production in photobioreactors by Raman spectroscopy and chemometrics
5. **Karolina AUGUSTYNIAK***
   Early detection of stem cells transformation using FTIR and High-Resolution Raman Imaging
6. **Luís BATISTA DE CARVALHO**
   Who's who? Discrimination of Breast Cell Lines by FTIR Microspectroscopy
7. **Vladimír BAUMRUK**
   Absolute configuration determination of promising new drug for Parkinson's disease via Raman optical activity
8. **Lucie BEDNÁROVÁ**
   Structural Investigation of α/γ-Hybrid Peptide Oligomers
9. **Uladzislau BLAZHKO**
   SIMIECORR: Mie scatter correction without a prior assumption about the chemical composition of a sample
10. **Arianna BONIZZI***
    Identification of a biochemical signature of dysfunctionality by Raman spectroscopy analysis of lipoproteins
11. **Radek BURA***
    Isotopic labeling of microalgae: Raman study

12. **Annalisa CARRETTA***
From synthetic identity to biological function of a doxorubicin liposomal formulation
13. **Murali Krishna CHILAKAPATI**
Raman isotope probing (RIsP) for identifying antimicrobial resistance
14. **Murali Krishna CHILAKAPATI**
Raman Spectroscopy based metabolomics for bioprocess monitoring
15. **Murali Krishna CHILAKAPATI**
Raman Spectroscopy Analysis of Plasma of Diabetes Patients without and with Retinopathy, Nephropathy, and Neuropathy
16. **Gary COONEY***
Tip-Enhanced Raman Spectroscopy of Tau fibrils: Measurement and Chemometric Analysis
17. **Mohammed ESSENDOUBI**
Raman Micro-Spectroscopy for skin and hair cosmetics testing
18. **Markéta FOUSKOVÁ**
Raman Spectroscopy in the Early Diagnosis of Colorectal Cancer
19. **Francesca GASPARIN***
Live-cell Mid-infrared Optoacoustic Microscopy and Spectroscopy for Longitudinal Metabolic Monitoring
20. **Philip GASSE***
Two-dimensional infrared spectroscopy of carbohydrates with site-specific reporter groups
21. **Pooja GIRISH***
Spectral tissue imaging for ex-vivo cancer diagnosis and survey
22. **Giulia GIUBERTONI**
In situ identification of secondary structures in unpurified Bombyx mori silk fibrils using polarized two-dimensional infrared spectroscopy
23. **Cyril GOBINET**
Supervised learning of infrared spectral images for the diagnosis of different types of breast cancer
24. **Julien GUILLARD***
FTIR spectral imaging analysis of cirrhosis development in two murine models
25. **Petra HELLWIG**
Vibrational spectroscopies and microscopies: a tool to study and identify neurodegenerative diseases
26. **Mahmoud HULEIHEL**
Infrared Spectroscopy in Tandem with Machine Learning for Simultaneous Rapid Identification of Bacteria Isolated Directly from Patients' Urine Samples and Determination of Their Susceptibility to Antibiotics
27. **Seydou KANE**
Reduction of acquisition time in Fourier transform infrared spectroscopy by deep learning

28. **Hichem KICHOU***
Analytical performance of Raman spectroscopy for quantification of active ingredients in Human stratum corneum

29. **Eva KOČIŠOVÁ**
Surface-enhanced Raman spectroscopy of biologically important molecules on V_2O_5 nanoparticle films

30. **Maria KRAJAČIĆ***
Artificial Neural Network and Support Vector Machine Regression for Forensic Age Determination Using Raman Spectra of Teeth

31. **Martin KRÁL***
Infrared s-SNOM imaging of surface adhesive polydopamine layers formed on various substrates

32. **Kateřina KRÁLOVÁ**
Combining Vibrational Spectroscopy, Metabolomics and Proteomics – Comprehensive Analysis of Blood Plasma for Clinical Diagnostics

33. **Lenka KREPSOVÁ**
Photoswitching of Triptycene-Based Molecular Machines Followed by Raman Spectroscopy

34. **Chen LIU***
Raman-based Detection of Antibiotics in Pharmaceutical Formulations and Biological Matrices

35. **Vanessa LOBOGNON***
Characterization of Bone-Implant Interface after Osseodensification by Infrared Imaging: Development of an Experimental Model

36. **Shane MAGUIRE***
ATR-FTIR spectroscopy of calcium-dependent lipid-binding proteins

37. **Shibarjun MANDAL***
Bacteria localization in hematogenous osteomyelitis using fluorescence and Raman imaging

38. **Lorenz MATTES**
Dual-comb-IR-spectroscopy to study temperature-jump dynamics of polyQ model peptides

39. **Aidan MEADE**
Detection of radiosensitive subpopulations ex-vivo via Raman microspectroscopy of lymphocytes

40. **Nathan MEYER***
Detection of Aβ 1-42 aggregates by RT-FAST: toward a new tool for the diagnostic of Alzheimer's disease

41. **Pierre NIZET***
Assessment of Ovarian Tumor Growth in Wild-Type and Lumican-Deficient Mice: Insights Using Infrared Spectral Imaging, Histopathology, and Immunohistochemistry

42. **Jonas OSHAUG PEDERSEN**
Controllable deposition of gold nanoparticles using a one-step centrifugation process and its application for SERS

43. **Imane OUDAHMANE***
Vibrational spectroscopy applied on biofluids: infrared spectroscopy for bladder cancer diagnosis using urine samples

44. **Pierre PRADA**
Identification of circulating biomarkers of Crohn's disease and spondyloarthritis using FTIR spectroscopy

45. **Ayyoub RAYYAD***
Analytical quality control of therapeutic mAbs preparations by Raman spectroscopy

46. **Ayyoub RAYYAD***
Confocal Raman microspectroscopy as a tool to access the quality of chicken egg

47. **José Javier RUIZ***
Identification and biochemical characterization of breast cancer cells resistant to neoadjuvant treatment by Raman Spectroscopy

48. **Oliva SALDANHA***
Calcium induced vesicular interactions studied with ATR- FTIR spectroscopy

49. **František ŠANDA**
Lineshape analysis of 2D spectra for fifth order spectroscopies: exciton transport, annihilation and spectral diffusion dynamics

50. **Christophe SANDT**
Heterogeneity of human hair medulla lipids, studied by synchrotron μFTIR and OPTIR microspectroscopy

51. **Igor SAZANOVICH**
ULTRA at Central Laser Facility

52. **Ramona SCHLESINGER**
The Photoreaction of the Proton-Pumping Rhodopsin 1 from the Maize Pathogen Basidiomycete Ustilago maydis

53. **Karlis SHVIRKSTS**
Radiation-induced continuous effect on the secondary structure of keratin studied by FTIR spectroscopy

54. **Till STENSITZKI**
High-throuput 2D-IR spectroscopy using the HARE chip

55. **Paul STRITT***
Resolving lipid dynamics in the photocycle of bacteriorhodopsin by mid-IR quantum cascade laser spectroscopy

56. **Daniela TÄUBER**
Comparative investigation of fibrillar actin using Nano IR spectroscopic and fluorescence microscopy imaging

57. **Laurence VAN GULICK**
Effects of obesity on the structural organization and mechanical properties of type I collagen

58. **Vincent VAN HEMELRYCK**
A new convenient tool to analyse protein glycosylation based on FT-IR spectroscopy

59. **Elise VINCENT**
FTIR and biochemical characterisation of glycosaminoglycans (GAGs) content in ovarian cancer cells

60. **Jehan WAEYTENS***
Characterization of secondary structure of protein by infrared nanospectroscopy

61. **Clara WATTIEZ***
Determining the influence of H/D exchange on IR spectroscopy and vibrational dynamics of polypeptide secondary structures

62. **Martina ZANGARI***
The role played by protein-asbestos fiber interaction in asbestos pathogenicity