

ESS & AMPERE Summer School Agenda 2019

Wednesday 26 June 2019

| Time | Activity |
|---------------|--|
| 8.30 - 9.00 | Student Registration <i>Faculty of Chemical Technology and Engineering, Szlak Street</i> |
| 9.00 - 9.15 | Welcome and Reception Prof. Cristina Leonelli - President of Association for Microwave Power in Europe for Research and Education (AMPERE) Prof. Muthupandian Ashokkumar - On behalf of President of European Society of Sonochemistry – Prof. Jean-Yves Hihn Prof. Dariusz Bogdal, <i>Dean of Faculty of Chemical Engineering and Technology, Cracow University of Technology</i> <i>Faculty of Environmental Engineering, Warszawska Street</i> |
| 9.15 - 10.15 | Introduction to Ultrasound (US) – Background and theory - Equipment, from lab - to industrial scale - Dr. Rachel Pflieger |
| 10.15 - 11:15 | Hydrodynamic cavitation: fundamental, technological and applicative approach - Dr. Marcus Franke |
| 11.15 - 11.30 | Coffe break |
| 11.30 - 12.30 | Fundamentals of microwave heating and enhanced inorganic chemistry"- Prof. Crisitina Leonelli |
| 12.30 - 13.30 | Lunch |
| 13.30 - 13.50 | SELVA presentation. |
| 13.50 - 15.00 | Green chemistry for synthesis of nanoparticles for nanomedicine - Prof. Witold Łojkowski |
| 15.00 - 17.00 | Practical laboratories – Microwaves – Selva Practical laboratories – Microwaves – MSc. Julia Radwan-Pragłowska and MSc. Łukasz Janus <i>Faculty of Chemical Technology and Engineering, Szlak Street, 2nd Floor</i> |

Thursday 27 June 2019

| Time | Activity |
|---------------|---|
| 9.00 - 10.15 | Ultrasonic synthesis of functional bio- and nanomaterials - Prof. Muthupandian Ashokkumar <i>Faculty of Environmental Engineering, Warszawska Street</i> |
| 10.15 - 11.00 | Microwave-enhanced synthesis of polymeric and hybrid materials - Prof. Dariusz Bogdal |
| 11.00 - 11.15 | Coffe break |
| 11.15 - 12.30 | Application of ultrasound in food processing - Prof. Muthupandian Ashokkumar |
| 12.30 - 13.30 | Lunch |
| 13.30 - 14:45 | Synthesis of nanoparticles under microwave irradiation - Prof. Katarzyna Matras-Postolek |
| 14.15 - 14.45 | Samples mineralization under microwave conditions - Dr. Edward Reszke |
| 15.00 - 17.00 | Practical laboratories – Microwaves – Ertech Practical laboratories – Ultrasounds – SinapTec <i>Faculty of Chemical Technology and Engineering, Szlak Street, 2nd Floor</i> |

Friday 28 June 2019

| Time | Activity |
|---------------|---|
| 9.00 - 10:15 | Ultrasonic synthesis of polymers - Prof. Muthupandian Ashokkumar <i>Faculty of Chemical Technology and Engineering, Szlak Street</i> |
| 10.15 - 11.00 | Ultrasound: a tool for advanced features energy and environmental applications - Dr. Rachel Pflieger |
| 11.00 - 11.15 | Coffe break |
| 11.15 - 11.35 | Challenges of microwave solvothermal synthesis of nanoparticles - MSc. Sylwia Dąbrowska |
| 11.35 - 12.00 | Mechanism for sonocoating of materials with nanoparticles - MSc. Urszula Szafaj |
| 12.00 - 12.30 | Comparison of synthesis methods of brexpiprazole under microwave and ultrasound conditions - MSc. Kinga Lis |
| 12.30 - 13.15 | Modification of biopolymers under microwave irradiation - Dr. Marek Piątkowski |
| 13.15 | Final remarks |