

Plenary Lectures	13-19
PL-1 Application of Ultrasound for the Production of Biomass Energy	14
PL-2 Some Approaches to the Scale-up of Ultrasonic Processing	16
PL-3 Hydrodynamic Cavitation for Environmental Protection.....	18
Invited Lectures	21-32
IL-1 Some Applications of Ultrasonic Technology in the Oil Industry	22
IL-2 Some Applications of Ultrasound in Extraction Technology.....	24
IL-3 HIFU Cavitation in Pulsed and Continuous Ultrasound Fields	26
IL-4 Ultrasound assisted catalytic reactions and preparation of catalysts for energy applications.....	28
IL-5 Physical, Chemical and Biological Effects of Ultrasound in Water Solutions	29
IL-6 Some sonochemical reactions in ionic fluids.....	30
Tribute	33-34
T-1 A Tribute to Jose González-García. A Life Dedicated to research	34
Oral Communications	35-118
OC-1 Sonochemical Production of Fatty Alkyl Methyl Esters from Raw Oils	36
OC-2 Effect of Ultrasonic Frequency on the Mechanism of Formic Acid Sonolysis	38
OC-3 Case Study: Alternative oil refinery spent caustic treatment system based on ultrasound aided advanced oxidation process	39
OC-4 Sono-catalytic Degradation of 4-Chlorophenol by Sono-synthesized Nano-magnet (La _{0.7} Sr _{0.3} MnO ₃).....	40
OC-5 Optimization of Oxidation Processes of Hydroquinone using Suction-Cavitation.....	41
OC-6 Adsorbable Organic Halogen Compounds Removal in an Industrial Wastewater by Sonolysis.....	43
OC-7 The Effect of Irradiation Distance on Sonochemical Reaction.....	45
OC-8 Investigation of Design Parameters in Ultrasound Reactors	47
OC-9 Ultrasound Combined with Conventional and Innovative Techniques for Extraction of Natural Products.....	49
OC-10 The Separation of Azeotropic Mixtures by Ultrasound-Assisted Distillation	51
OC-11 Degradation of Alachlor by Ultrasound, Ozone and Their Combination	53
OC-12 Degradation of the Antiepileptic Drug Carbamazepin in water by Hydrodynamic-Acoustic-Cavitation (HAC)	55
OC-13 The Effect of the Anode Material on the Sonoelectrochemical Treatment of Aqueous Trichloroacetic Acid Solutions	57
OC-14 Visible-light Can Degrade RB ₅ by Sono-Synthesized Core-Shell Nanocrystal.....	59
OC-15 Preliminary electrochemical study for copper electrodeposition from sonicated Deep Eutectic Solvent (DES).....	60
OC-16 Modification of the Ultrasound Induced Activity by the Presence of a Liquid Flow in the Acoustic Field. Study at Two Low Frequencies (20 and 40kHz) : Mapping Flow Velocities by Particle Image Velocimetry (PIV) and Electrochemical Mass Transfer Measurements	61
OC-17 Sono-Exchanger: An Innovative Improved Heat Exchanger Involving Ultrasound Technology	63
OC-18 Geometric Parameter Determination for design of sonoreactor by Measuring Power Intensity and Radical Generation Rate	65
OC-19 Correlation between Sonochemistry and Sonoluminescence at Various Frequencies.....	67
OC-20 Ultrabright Sonoluminescence of Uranyl Ions in Aqueous Solutions.....	68
OC-21 The Effect of Gas Type on Single Bubble Sonochemical Luminescence	70
OC-22 Luminescence of Lanthanides triggered by Cavitation	72
OC-23 Sonochemical Synthesis of (Ce,Zr)O ₂ Based Nanocatalysts	73
OC-24 Synthesis of Copper Sulfide and Copper Selenide Nanoparticles with Different Phases in Aqueous Solutions by Sonochemical Method	75
OC-25 Sonochemical activation of metal based heterogeneous catalysts and SERS materials	77
OC-26 Mechanisms and Applications of Sonochemical Reduction of PtIV in Pure Water under Ar/CO Atmosphere.....	79
OC-27 Shape and Size Evolution of Manganese Oxide Nanocrystals: Effect of External Magnetic Field and Ultrasonic Power.....	80
OC-28 Growth and Size Control of Glycine Crystal with High Frequency Ultrasound	82

OC-29	Ultrasound-Induced Changes to Micelle Structures	84
OC-30	Control of Algal Blooms using Ultrasound.....	86
OC-31	Ultrasound Effect on Viscosity Change Stimulated by the Exposure to Aqueous Polymers Having Hydrogen Bonding	87
OC-32	Ultrasonically Assisted Decoration of Anode Materials for Solid Oxide Fuel Cells	88
OC-33	A Pilot Scale Sonochemical Coating Process For The Production Of Antibacterial Fabrics.....	90
OC-34	Ultrasonic Nanomedicine in the Aspect of Therapy of Oncological Diseases.....	91
OC-35	Ultrasonic Exposure on the Various Cells Type	93
OC-36	Effect of hydrodynamic cavitation on microbial inactivation: potential for disinfection technique.....	94
OC-37	Acoustic Cavitation in Flow Reactors: Enabling Technology for modern Chemistry.....	95
OC-38	Ultrasound intensification of ethylbenzene oxidation	97
OC-39	Sonochemistry Past Present and Future.....	98
OC-40	Effects of high frequency ultrasound on electroactivity and doping level of conducting polymers: influence of OH ⁻ radicals, structure and ions mobility	99
OC-41	Opposing Effects of Flow on Sonochemical Activity in a High Frequency Ultrasonic Reactor.....	101
OC-42	Design of a New Bifrequential 20/500 kHz Ultrasonic Reactor for the Depolymerisation of Starch-Based Waste into Reducing Sugars	103
OC-43	Non-Equilibrium Vibrational Excitation of OH Radicals Generated During Multibubble Cavitation in Water	105
OC-44	Sonoluminescence of Tb(III) at the Extended Solid-Liquid Interface	107
OC-45	Using Pulsed-Wave Ultrasound to Evaluate Hydroxyl Radical Scavengers in Sonochemical Systems	108
OC-46	Regulation of Red-Ox Ultrasonic Induced Reactions: Silicon Modification towards Porous Luminescent Structure.....	109
OC-47	Detection of OH radicals in the process of hydrodynamic cavitation and in a sonoreaktor using a luminescence method	110
OC-48	Freezing Conditions in Inertial Cavitation Bubbles During Post-Collapses Expansions	111
OC-49	The Influence of Ions on Coalescence of Charged Bubbles in an Acoustic Field	113
OC-50	Exfoliation and size reduction treatment of vermiculite by ultrasound irradiation	115
OC-51	Study Effect of Libyan Treated Kaolin, by Sonochemical Method on the Properties of Cement Paste and Mortar	117
Poster Session		119-188
P-1	The Sonochemical Decolorization of Textile Azo Dye Orange II by Using 850 kHz Ultrasonic Reactor	120
P-2	Efficiency of the Combined Action of Ultrasound and Nanoparticles of Different Nature on Bacteria	122
P-3	Rate Constants Estimation Model of Ultrasonic Degradation Reaction of Methylene Blue	124
P-4	Synthesis and Characterization of Polypyrrole Particle using Ultrasound.....	126
P-5	Ultrasound-assisted extraction of oil from microalgae using terpenes as an alternative to n-hexane.....	128
P-6	Elucidation of Kinetic Sonication Effects by Means of Molecular Dynamics Simulation	129
P-7	Impact of Ultrasound on Some Solute-Solvent Interactions.....	131
P-8	Effect of High Intensity Ultrasound on the Mesosstructure of Amorphous Hydrous Metal Oxides	133
P-9	Acoustic Detection of Foreign Bodies near a Single Bubble in a Levitation Cell	135
P-10	Influence of Nanoparticles Introduction in a Liquid on Sonoluminescence and Cavitation Noise Spectra.....	137
P-11	Sonochemical Precipitation of Uranium and Lanthanide Oxides and Phosphates	138
P-12	Cavitation Occurrence by the Vibro-Resonance Method	139
P-13	Rheological Properties of Silver Nanofluids Fabricated by Sonochemical Method.....	140
P-14	The Use of Ultrasound in Matrix Polymerization of Vinyl Monomers	141
P-15	Sonophotocatalysis of Malonic Acid Solution and Elongation of Skelton Alkyl Carbon Chain.....	142
P-16	Through Hole Plating of Printed Circuit Boards using Ultrasonically Dispersed Copper Nanoparticles.....	143
P-17	Ultrasonic treatment of homogeneous catalyst for cyclohexane oxidation	144
P-18	Ultrasonic treatment of glassy carbon for nanoparticle preparation.....	145
P-19	Sono-recovery of copper from deep eutectic solvent based on choline chloride	147

P-20	Evaluation of Ultrasound Systems for Sulphur and Nitrogen Removal from Diesel Fuels by Oxidative Treatment	148
P-21	Sono-Electrochemical Preparation of Gold Nanoparticles for Novel SOFC Anode Materials	150
P-22	Sonochemical Synthesis of Molybdenum Oxide Nanoparticles for Decoration of SOFC Anode Powders	152
P-23	Sonochemical Synthesis of Rhenium Oxide Nanoparticles for Fuel Cell Applications	153
P-24	Experimental evidence of viscosity influence in the cavitation structure bubbles	154
P-25	Preparation of the Stimulator of Biotechnological Processes in Food Industry in the Field of Ultrasound Waves	155
P-26	Sonophotocatalytic Degradation of Methyl Orange using TiO ₂ Photo-catalysts Prepared under Different Experimental Conditions.....	156
P-27	US-assisted Preparation of Photoactive TiO ₂ : Role of the Solvent on the Final Material Features and Photocatalytic Efficiency	157
P-28	Dynamics and sonoluminescence of few bubble systems in phosphoric acid.....	159
P-29	Bubble dynamics and sonoluminescence activity in a multi-bubble system	160
P-30	Effect of Polymer Molecular Weight on the Constants of their Degradation in Aqueous Solution under the Influence of Ultrasound	161
P-31	Kinetic Regularities and Features of Ultrasound Cavitation in Water Systems Containing Organic and Biological Waste	163
P-32	Synergism and post-effect of ultrasound cavitation in water dispersions of microorganisms	164
P-33	Influence of Previous Ultrasonication on Heterogeneous Catalysts Activity in Oxidation Reactions	165
P-34	Influence of Ultrasound Cavitation in Preparation of Bitumen Modified with Epoxy Rapeseed Oil.....	166
P-35	Large Scale Ultrasonic Boat Cleaning System: in situ tests with 20 kHz Specific Ultrasonic Cleaning Tool.....	167
P-36	Determination of Oxygen Equilibrium and Mass Transfer in Water During an High Frequency Ultrasonic Irradiation	169
P-37	Study of Cavitation Bubbles Size Generated by High Intensity Focused Ultrasound	171
P-38	Use of ultrasonic cavitation for purification of alcohols production waste – waters in the atmosphere of different gases	173
P-39	Ultrasonic intensification of the process of extraction of organic acids.....	174
P-40	Ultrasonic Device for Continuous Flow Production (SONITUBE® 20-35 kHz).....	175
P-41	Process Intensification in Plant Extraction under high-Intensity Ultrasound.....	177
P-42	Device for the HIFU Cavitation Activity Monitoring	178
P-43	Stages of the HIFU Cavitation Zone Development and their Identification	180
P-44	Study of impact of Libyan kaolin, treatment by sonochemical (bath method) on improving compressive strength in Cement Mortar	181
P-45	Power Ultrasound Effect on Poultry Meat Microbial Flora	182
P-46	Effect of ultrasound on cyanobacteria in water	184
P-47	Microbial pollutants removal from water with use of complex adsorption-ultrasound technology	185
P-48	Sono-electrochemical Degradation of Phenol with High Frequency Ultrasound and Stainless Steel Electrode	186
Author Index		189