P1  HIGHLIGHTS FROM 5 DECADES IN HIGH PRESSURE PROCESS TECHNOLOGY (lecture in honour of Professor Gerd Brunner)
Eckhard Weidner
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K1  JOURNEY TO THE NEW WORLD: BEYOND CRITICAL POINT.
Youn-Woo Lee
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CASE STUDIES

CS1  RECENT DEVELOPMENTS IN STERILIZATION, DISINFECTION, AND MEDICAL CLEANING USING COMPRESSED CARBON DIOXIDE.
Michael A. Matthews,
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&  SUPERCRITICAL CO2 STERILIZATION OF APIs: IS SC CO2 A PENETRATING STERILANT? -- GUIDELINES FOR SCALE-UP
Omar A. Salman
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CS2  INDUSTRIALIZATION OF A SUPERCRITICAL CO2 PROCESS FOR OXIDATION OF CELLULOSE
Jean-Stéphane Condoret*, Séverine Camy*, Kevin Pizarro*, Michel Perrut*, Nicolas Deshayes*
1Université de Toulouse, Laboratoire de Génie Chimique, INP, CNRS, UPS, Toulouse, France
2Medtronic France, Trévoux, France
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CS3  CO2-INTENSIFIED TANNING - FROM FIRST IDEAS TO INDUSTRIAL APPLICATION
Eckhard Weidner1,2, Philipp Widmer3, Manfred Renner2, Helmut Geihsler2
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2Fraunhofer UMSICHT, Oberhausen, Germany,
3ECO2, Taverne, Switzerland
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CS4  PGX TECHNOLOGY: A CASE OF UNIVERSITY – INDUSTRY PARTNERSHIP FOR INNOVATION
Feral Temelli A and Bernhard Selbstriedb
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CS5  FROM CORK OAK TREE TO SUSTAINABLE CORK STOPPERS: THE DIAMANT PROCESS®
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PARALLEL SESSIONS

ENERGY and FUELS (E)

Keynote

KE1 DEVELOPMENT OF A COMMERCIAL, FULLY-CONTINUOUS, SUPERCRITICAL FLUID EXTRACTION PROCESS FOR OIL RECOVERY FROM DRILLING WASTE
Warren H. Stiver a and Selma E. Guigard b,

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Oral

OE01 HYDROTHERMAL GASIFICATION OF HUMIC ACID AS A MODEL COMPOUNF SEWAGE SLUDGE FOR HYDROGEN RICH-SYNGAS PRODUCTION
Janusz A. Kozinski1,*, Miao Gong2, Sonil Nanda1, Ajay K. Dalai3
1School of Civil Engineering and Architecture, Anhui University of Technology, Maanshan, Anhui, China
2Department of Earth and Space Science and Engineering, York University, Toronto, Ontario, Canada
3Department of Chemical and Biological Engineering, Unive. of Saskatchewan, Saskatoon, Canada

OE02 REAL SLUDGE FROM A WASTEWATER TREATMENT PLANT AS ALTERNATIVE TO MICROALGAE AS FEEDSTOCK OF HYDROTHERMAL LIQUEFACTION OF BIOMASS TO BIOCRUDE.
Claudia Prestigiacomo1, Onofrio Scialdone1, Alessandro Galia1,*, Paula Costa2, Filomena Pinto2
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OE03 BIOFUEL AND BIOCHEMICAL SYNTHESIS IN SUPERCRITICAL FLUIDS
Jaehoon Kim1,2,3,*
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2 School of Mechanical Engineering, Sungkyunkwan University, Gyeonggi-Do, Republic of Korea
3 SKKU Advanced Institute of Nano Technology (SAINT), Sungkyunkwan University, Gyeonggi-Do, Republic of Korea.
MATERIALS (A-B-D-I-M)

POROUS MATERIALS: POLYMERS, FOAMS, AEROGELS (A)

Keynotes

KA1 CAN X-RAYS BE USED TO MONITOR POLYMERISATIONS IN SUPERCRITICAL CO2? A STUDY IN SAXS
Thomas M. Bennett,* Mohammad Alauhdin,* Daniel Hermida-Merino,* Guping He,* Simon P. Bassett,* Steven M. Howdle**
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**The European Synchrotron, Grenoble, France
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KA2 ORGANIC AEROGELS AS MONOLITHS AND PARTICLES: ON THE WAY FROM LABORATORY TO PRODUCTION SCALE
Irina Smirnova
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KA3 FEATURES OF SUPERCRITICAL CO2 IN THE DELICATE WORLD OF THE NANOPORES
Ana M. López-Periago,1 Javier Saurina,2 Concepción Domingo1
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Oral

OA01 MODELLING THE CONTINUOUS FOAMING IN THE DIE DURING SUPERCRITICAL CO2 ASSISTED EXTRUSION
Margot Chauvet, Fabien Baillon, Martial Sauceau*, Jacques Fages
Université de Toulouse; Ecole des Mines d’Albi; UMR CNRS 5302; Centre RAPSODEE, Albi, France
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OA02 INVESTIGATION OF CO2-BLOWN POLYLACTIDE FOAMS BY EXPERIMENTAL CHARACTERIZATION AND THEORETICAL MODELING
Judith Winck * and Sulamith Frerich
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OA03 SYNTHESIS AND CHARACTERIZATION OF STAR POLYMERS IN SUPERCRITICAL CO2: INFLUENCE OF THE CATALYTIC SYSTEM ON POLYMER ARCHITECTURE
Payal Baheti1,2, Cécile Bouilhac1*, Patrick Lacroix-Desmazes1, Steven M. Howdle2
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OA04 SOLVATION EFFECT OF CO2 ON ACCELERATING THE CURING REACTION PROCESS OF EPOXY RESIN
Dong-Dong Hu*, Jia-xun Lyu, Tao Liu, Ling Zhao*
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OA05 ASSESSMENT OF THE GLASS TRANSITION AND THE MELTING/CRYSTALLIZATION TEMPERATURES OF POLYMERS EXPOSED TO CARBON DIOXIDE. A NEW EXPERIMENTAL TECHNIQUE
Erdogan Kiran* and John C. Hassler
Department of Chemical Engineering, Virginia Tech, Blacksburg, Virginia, USA
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OA06 LAYERED AND GRADED FOAMS WITH THE USE OF SUPERCritical CO2
Ernesto Di Maio
Dipartimento di Ingegneria Chimica, dei Materiali e della Produzione Industriale Unive. of Naples, Italy

OA07 STRUCTURAL TRANSFORMATION AND FUNCTIONALIZATION OF MATERIALS IN SUPERCritical FLUIDS
M. Kiselev*
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OA08 Cu-ALGINATE AND Ca-ALGINATE AEROGELS PRODUCTION BY SUPERCritical GEL DRYING FOR BIOMEDICAL APPLICATIONS
Lucia Baldino, Stefano Cardea*, Mariarosa Scognamiglio, Ernesto Reverchon
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OA09 CREATION OF MICROSTRUCTURED POLYMERS WITH DEFINED MICRO AND NANO pores FOR DIFFERENT APPLICATIONS USING HOT EMBossING AND CO2
Gabriele Wieganda, Hendrik Hölscerb, Siegbert Johnsena, Julia Syurika,
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OA10 COMPUTER AIDE兑现 DESIGN OF AEROGELS AND MATERIALS BASED ON IT
N. Menshutina
D. Mendeleev University of Chemical Technology of Russia, Moscow, Russian Federation;
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OA11 NOVEL MOF-ALGINATE AEROGEL COMPOSITES FOR DRUG DELIVERY
Zeynep İnönüa, Seda Keskin, Can Erkey*
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OA12 SCALE-UP OF ALGINATE AEROGEL MICROPARTICLES PRODUCTION: DEVELOPMENT OF A CONTINUOUS EMULSION-GELATION METHOD
Victor Baudron*, Pavel Gurikov and Irina Smirnova
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OA13 INVESTIGATION OF KINETICS OF SUPERCritical DRYING OF CALCIUM ALGINATE ALCOgel PARTICLES
İbrahim Şahin*, Erdal Uzunlar, Can Erkey
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OA14 IMPREGNATION OF AÇAÍ RESIDUE EXTRACTS IN SILICA-AEROGEL
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BIOMATERIALS & MEDICAL DEVICES (B)

Keynote

KB1 SUPERCRITICAL FLUID TECHNOLOGY APPLIED TO VISION SCIENCE.
Elisabeth Badens*bc, Yasmine Masmoudia,c, Kanjana Ongkasina,c, Abir Bouledjouidja*, Liansong Wangbc, Wei Hec
a Aix Marseille Univ, CNRS, Centrale Marseille, M2P2, Marseille, France
b He University Eye Hospital, Liaoning Province, China
c Franco-Chinese Research Center on Supercritical Fluid Technology applied to Vision Science
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Oral

OB01 POLYSACCHARIDE AEROGEL COATINGS IN HIP ARTHROPLASTY
Zoran Novak*, Gabrijela Horvat, Željko Knez, Lidija Gradišnik, Uroš Mavers, Klodian Xhanari, Matjaž Finšgar
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b University of Maribor, Faculty of Medicine, Maribor, Slovenia
c University of Tirana, Faculty of Natural Sciences, Tirana, Albania
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OB02 COMMERCIALIZING A CO2 TECHNOLOGY PLATFORM FOR REMOVING ASTHMA TRIGGERS FROM THE HOME
Michael A. Matthews*, Alan M. Quick, Calvin Gorsuch, Erik Svendsen, Odell Glenn
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OB03 A NOVEL SUPERCRITICAL CO2-BASED DECELLULARIZATION METHOD FOR MAINTAINING SCAFFOLD HYDRATION AND MECHANICAL PROPERTIES
Dominic M. Casali,a Rachel M. Handletonb, and Michael A. Matthewsab
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b Biomedical Engineering Program, University of South Carolina, Columbia, USA
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OB04 DESIGN OF A PORTABLE HIGH-PRESSURE REACTOR FOR THE IN SITU FOAMING OF POLYMER IMPLANTS USING CARBON DIOXIDE AS A POROGEN AGENT
Ana Rita C. Duarte1,2, Rui M. Duarte3,4,5, Jorge Correia-Pinto3,4,6, Rui L. Reis1,2
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4 Life and Health Sciences Research Institute (ICVS), School of Medicine, Univ. of Minho, Braga, Portugal
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OB05 PRODUCTION OF PLGA FOAMS USING scCO2 FOR DRUG DELIVERY SYSTEMS.
Álvarez, I. a, *, Gutiérrez, C. b, Rodríguez, J.F. a, de Lucas, A. c, Gracia, I. a, García, M.T.a
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OB06 INFLUENCE OF CARRIER PROPERTIES ON THE DISSOLUTION BEHAVIOR OF IBUPROFEN AT DIFFERENT PH-VALUES
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OB07 A VERSATILE SUPERCRITICAL ASSISTED PROCESS FOR THE PRODUCTION OF NANOSONES: DEVELOPMENT, PRODUCTION AND COMMERCIALIZATION
R. Campardelli, P. Trucillo, E. Reverchon*
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PARTICLE DESIGN (D)

OD01 COMPRESSED FLUIDS FOR THE PRODUCTION OF LIPID-BASED NANOVESICLES WITH APPLICATION IN NANOMEDICINE
L. Ferrer-Tassies*, N. Segovia, E. Gonzalez, N. Grimaldi, F. Andrade, A. Ardizzone, S. Sala
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OD02 SUPERCritical assisted atomization for the stabilization of active compounds
Alessia Di Capua, Renata Adami* and Ernesto Reverchon.
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OD03 MICROENCAPSULATION BY HIGH-PRESSURE SPRAYING PROCESSES
S. Henske¹, A. Kilzer*, M. Petermann²
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OD04 CONTINUOUS PRODUCTION OF HOMOGENEOUS VESICULAR SYSTEMS USING COMPRESSED FLUIDS. SCALE-UP OF THE DELOS-SUSP METHOD FOR THE PREPARATION OF LIPOSOMAL AND QUATSUV® FORMULATIONS.
Alba Córdoba* a, Josep Merlo* a, David Pinya b, Lidia Ferrer*, Jaume Veciana b,c,a, Nora Ventosa b,c,d,a, and Santi Sala a,b,c,a
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OD05 EFFECTS OF ISOMERIZATION ON EXTRACTION AND MICRONIZATION OF CAROTENOIDS USING SUPERCRITICAL FLUID
Motonobu Goto*, Masaki Honda, Tomohiko Kodama, Haruka Sato, Maiko Ono, Wahyudiono, Hideki Kanda
Department of Materials Process Engineering, Nagoya University, Nagoya Japan

OD06 MOLECULAR MODELING OF SOLID-FLUID INTERACTIONS TOWARD THE PREDICTION AND CONTROL OF SOLID-PHASE PROPERTIES: A DRUG RECRYSTALLIZATION CASE STUDY USING THE SAS PROCESS
Sébastien CLERCQ *, Adil MOUAHID *, Gérard PEPE b, Elisabeth BADENS a
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OD07 NONMONOTONICITY OF THE DEPENDENCE OF MEAN PARTICLE SIZE ON CONCENTRATION IN SUPERCRITICAL ANTISOLVENT PRECIPITATION
A. M. Vorobei, O. I. Pokrovskiy, K.B. Ustinovich, O.O. Parenago, V.V. Lunin
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OD08 CO-PRECIPITATION OF CURCUMIN-PVP VIA THE SUPERCRITICAL ANTISOLVENT PROCESS
Ravenna Lessa Matos, Tiejun Lu, Valentina Prosapio, Chris McConville, Gary Leake, Andrew Ingram
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INORGANIC MATERIALS (I)

Keynote

KII SUPERCRITICAL FLUIDS TECHNOLOGY FOR ADVANCED GEOMINERALS: FROM LAB TO PILOT SCALE FACILITIES
Cyril Aymonier, Marie Claverie, Marta Diez-Garcia, François Martin, Christel Careme, Gilles Philippot, Michael Tsang, Guido Sonnemann
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Oral

O101 CHEMICAL VALORISATION USING CEO2 NANOCATALYST UNDER NEARCRITICAL HYDROTHERMAL CONDITIONS
Gimyeong Seong, Ryohei Inoue, Haruka Hirai and Tadafumi Adschiri
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2 Department of Chemical Engineering, Graduate School of Engineering, Tohoku University, Sendai, Japan
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O102 CO2 SEQUESTRATION BY BORON MINERALS
Ali Yalçın, Sercan Ipeksever, Mehmet Gönen
Süleyman Demirel University, Department of Chemical Engineering, 32260, Batı Yerleskesi, Isparta, Turkey
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O103 GEOLOGICAL LABS ON CHIP: INVESTIGATING DEEP UNDERGROUND PROCESSES UNDER PRESSURE AT MICROSCALE
Anaïs Cario, Abdou Khadre Diouf, Carole Lecoutre, Olivier Nguyen, Dominique Bernard, Yves Garrabos, Samuel Marre
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O104 DEVELOPMENT OF CU/NI BINARY CATALYST FOR HYDROTHERMAL OXIDATION OF REFRACTORY COMPOUNDS
Noritsugu Kometani,* and Masaaki Narita
Department of Applied Chemistry & Bioengineering, Graduate School of Engineering, Osaka City University, Japan
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O105 SYNTHESIS OF 2D Cu(II), Zn(II), AND Co(II) TRIFLUOROACETATE BASED METAL-ORGANIC FRAMEWORKS USING SUPERCRITICAL CO2
Ana López-Periago,a Núria Portolés-Gil,a Sarah Gowing,a Oriol Vallcorba,b Concepción Domingo,a and José Á. Ayllónc
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O106 HYDROTHERMAL PROCESS DEVELOPMENT FOR THE TREATMENT OF ASBESTOS CONTAINING WASTE.
Nzogo Metoule C.T.1, Delaby S.1, Ferrasse J.-H.2 and Boutin O.2,
1 CSTB, Grenoble, France;
2 Aix-Marseille University, Marseille, France.

O107 EXPERIMENTAL/NUMERICAL APPROACHES FOR THE INVESTIGATION OF NUCLEATION, GROWTH AND AGGREGATION MECHANISMS FOR THE PRECIPITATION OF Na2SO4 IN SUPERCRITICAL WATER
Arnaud Erriguible1,2, Thomas Voisin1,2, Cyril Aymonier1*
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O108 KINETICS AND MECHANISM OF BaTiO3 FORMATION IN SUB- AND SUPERCRITICAL WATER
Kholodkova A.A.,b Danchevskaya M.N.,b Ivakin Yu.D.,a Muravieva G.P.a
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NANOMATERIALS (M)

Keynote

KM1 SUPERCritical FLuids for Nanotechnology
Tadafumi Adschiri*
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Oral

OM01 SUPERCritical FLUID DEPOSITION OF SILANES ON SOLID SURFACE FOR BIOSENSING AND HETEROGENEOUS CATALYSIS APPLICATIONS
Guillaume Nonglaton*
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OM02 ACTIVE COOLING OF COLD-SPRAY NOZZLES BY COMPRESSED CO₂ EXPANSION
Jacobo Morère, David Schmidt, Victor K. Champagne and James J. Watkins
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² Mechanical Engineering Department, University of Massachusetts Amherst USA
³ US Army Research Laboratory, Aberdeen Proving Ground, USA
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OM03 SUPERCRITICAL CARBON DIOXIDE DEPOSITION OF MULTI-WALLED CARBON NANOTUBE SUPPORTED Pd NANOCATALYSTS FOR SUZUKI-MIYaura COUPLING REACTIONS AT MILD TEMPERATURES
E. Erünlə, F. Ulusal, B. Gützel
¹ Chemical Engineering Department, The Faculty of Ceyhan Engineering, Cukurova Univ., Adana, Turkey
² Chemistry Department, The Faculty of Arts and Sciences, Cukurova University, Adana, Turkey
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OM04 SYNTHESIS OF ADVANCED NANOPHOTOCATALYSTS USING SUPERCRITICAL MILLI/MICRO-REACTOR
Ravi Anusuyadevi Prasaanth, Cyril Aymonier, Samuel Marre
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OM05 MORPHOLOGY CONTROL OF CuO NANOPARTICLES IN SBA-15 BY ADJUSTING THE DEPRESSURIZATION RATE OF SUPERCRITICAL CO₂
Guo-Yue Qiao, Qin-Qin Xu, Jian-Zhong Yin
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OM06 NEAR- AND SUPERCRITICAL HYDROTHERMAL FLOW SYNTHESIS OF METAL OXIDE NANOPARTICLES
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OM07 IN SITU PAIR DISTRIBUTION FUNCTION STUDY OF ZrO₂ NANOCRYSTALS FORMATION IN SUPERCRITICAL FLUIDS
Aimery Auxemery, Gilles Philippot, Bo Iversen, Cyril Aymonier
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OM08 SUPERCRITICAL WATER AS AN AGENT TO TREAT FUSED SILICA CAPILLARIES FOR ANALYTICAL SEPARATIONS
Michal Roth, Pavel Karásek, Marie Horká, Josef Planeta, Karel Šlais
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NATURAL PRODUCTS (N)

Keynotes

KN1 ADVANCING THE APPLICATION OF CRITICAL FLUID TECHNOLOGY IN CANNABIS SCIENCE & ENGINEERING
Jerry W. King*
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KN2 PRACTICAL ASPECTS OF PROCESSING HIGH VALUE LIPIDS USING SUPERCRITICAL FLUIDS
Owen Catchpole, Stephen Tallon, Teresa Moreno, Fernando Montanes
Callaghan Innovation, 69 Gracefield Road, Lower Hutt, New Zealand
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KN3 EXTRACTION OF LIPIDS FROM WET OR DRIED MICROALGAE
M.Sova¹, E.Lack¹, J.Hell¹, E.Glanz¹, S.Badenes², L.Costa², S. Pereira³, A.R. Serra², V. Verdelho², M. Stehr³, S. Reyer³
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Oral

ON01 INDUSTRIAL HEMP – THE BIG BOOM?! REGULATORY PROCEDURES – SCALE UP – POSSIBILITIES
M. Tippelt, J. Schulmeyr, L. Bredtmann
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ON02 TWO-STEP SUPERCRITICAL FLUID EXTRACTION OF ANTHOCYANINS AND TOTAL POLYPHENOLS FROM NITRARIA TANGUTORUN BOBR
Mingming Guan¹, Guangtao Li*, Shaokun Tang* a,b
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ON03 DEVELOPING SUPERCRITICAL FLUID EXTRACTION ASSISTED BY COLD PRESSED: A NOVEL EXTRACTION TECHNIQUE WITH PROMISING PERFORMANCE AS APPLIED TO PEQUI (CARYOCAR BASILIIENSE)
M. Angela A. Meireles*, Júlio C. Johner Flores, Tahmasb Hatami,
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ON04 PARTICLE SIZE DISTRIBUTION OF PRETREATED OILSEEDS AFFECTS CUMULATIVE SUPERCRITICAL CO2 EXTRACTION PLOTS
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ON05 ADDITION OF MANDARIN PEEL CV ARAYANA PEEL EXTRACTS OBTAINED WITH SUPERCRITICAL FLUIDS TO MAYONNAISE AS A NATURAL ANTIOXIDANT
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ON06 SUPERCRITICAL CO2 DRYING OF FOOD MATRICES
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ON07 EFFECT OF HIGH PRESSURE PROCESSING ASSISTED BY TEMPERATURE ON BIOACTIVE COMPOUNDS AND ANTIOXIDANT ACTIVITY OF MATE TEA AND MATE TEA LEAVES SWEETENED WITH STEVIA REBAUDIANA
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ON08 VALORIZATION OF BERRY POMACE BY CONSECUTIVE EXTRACTION WITH SUPERCRITICAL CARBON DIOXIDE AND PRESSURIZED LIQUIDS
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ON09 ISOLATION AND DEPROTEINATION OF BIOACTIVE POLYSACCHARIDES FROM CRASSOSTREA GIGAS USING SUBCRITICAL WATER
Adane Tilahun a,b, Hee Jeong Lee a, Yeon Jin Cho a, Sol Ji Chae a, and Byung Soo Chun **
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ON10 EFFECT OF SUPERCRITICAL CO2 AND TYPE OF CO-SOLVENT FOR EXTRACTION OF LIPIDS AND TERPENICS FROM GUAYULE BIOMASS (PARTHENIUM ARGENTATUM)
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ON11 APPLICATION OF AN ARTIFICIAL NEURAL NETWORK MODEL FOR THE SUPERCRITICAL FLUID EXTRACTION OF SEED OIL FROM ARGEMONE MEXICANA (L.) SEEDS.
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ON12 A STUDY OF ESSENTIAL OIL EXTRACTION AND ANTIOXIDANT ACTIVITY OF PATCHOULI (POGOSTEMON CABLIN) USING SUPERCRITICAL CARBON DIOXIDE
Soon Hong Soh1,2, Shuchi Agarwal1, Sundaramurthy Jayaraman1, Ming Tan Tham2, Cindy Lai Yeng Lee2, and Akshay Jain1**
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ON13 FLOWERS ABSOLUTE FINGERPRINT WITH SFC-HRMS NON TARGETED METHOD
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ON14 EXTRACTION OF VALUABLE COMPOUNDS FROM POMEGRANATE RESIDUES: FOCUS ON THE SUGAR CONTENT OF EXTRACTS.
Besma Khoualdiaa, Raphaëlle Savoirea, Pascale Subra-Paternaulta, Christelle Harscoat-Schiavoa
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ON15 USE OF ULTRA HIGH PRESSURE FLUIDS ON INDUSTRIAL-SCALE
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ON16 TERNARY PHASE EQUILIBRIUM DATA OF CAFFEINE-WATER-SCCO2 AND CONSEQUENCES FOR SUPERCritical DECAFFEINATION PROCESSES
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ON17 EXTRACTING THE NATURAL INSECTICIDE ABIETADIENE FROM P. PINASTER BRANCHES USING SCCO2:
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ON18 DOWNSTREAM PROCESSING OF ISOCHRYSIS GALBANA USING WET BIOMASS
E. Ibañez*a, B. Gilbert-Lópezb, J. A. Mendiolaa, B. Houweling-Tanc, L.A.M. van den Broeka, c, L. Sijtsmaa, M. Herreroa, A. Cifuentesa
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EQUIPMENT and PROCESSES (P)

Keynotes

KP1 AN OVERVIEW OF CORROSION ISSUES IN SUPERCritical FLUIDS
Damien Féron1,*, Stéphane Sarrade2,3, Fabien Rouillard1, Stéphane Perrin4, Raphael Robin1, Jean-Christophe Ruiz1, Hubert-Alexandre Turc1,
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KP2 SUPERCRITICAL FLUID EXTRACTION AND FRACTIONATION: TWO SOUTH AFRICAN FEASIBILITY STUDIES
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Oral

OP01 THE PRELIMINARY DISCUSSION OF SUPERCRITICAL CO2 SPRAYING DYEING
Sun Fayu*a,b, Wang Weiqiang*a,b, Niu junnan*a,b, Yuan shuying*a,b, Li Aiju*c

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OP02 DYEING OF SOLID WOOD MEDIATED BY SCCO2: CHALLENGES AND NOVEL APPROACHES
Julien Jaxel*a,b, Louise Fontaine*b, Thomas Krenke*a, Markus Bacher*b, Hassan Amer*b, Christian Hansmann*a and Falk Liebner*a,b

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OP03 CONTRIBUTION OF COMPUTATIONAL FLUID DYNAMICS AND THERMODYNAMICS TO THE DEVELOPMENT OF SUPERCRITICAL CARBON DIOXIDE EXTRACTION PROCESSES
Renan Ravetti duran, Mouna Lazrag, Romain Privat, Cécile Lemaitre, Danielle Barth*

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OP04 MODELLING AND SIMULATION OF A FULLY CONTINUOUS PILOT-SCALE SFE PROCESS
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OP05 RAPID SEPARATION OF ORGANIC COMPOUNDS USING CONTINUOUS SUPERCRITICAL CO2/LIQUID EXTRACTION PROCESS USING MICROMIXER
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OP06 EXPERIMENTAL INVESTIGATION ON CONVECTIVE HEAT TRANSFER OF SUPERCRITICAL NOVEC 649 IN A HORIZONTAL MINIATURE TUBE
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REATIONS (R)

Keynotes

KR1 HYDROTHERMAL OXIDATION: THE NEXT GENERATION FOR ABATEMENT OF UNRECYCLABLE WASTE OF HAZARDOUS NATURE AND COMPLEX COMPOSITION
Bushra Al-Duri, I. N. Kings
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KR2 THE HETEROGENEOUS SCF PROCESSES FOR CATALYSIS AND RELATED AREAS – IN THE FOCUS OF RUSSIAN R&D INSTITUTIONS
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KR3 EXPERIMENTAL AND NUMERICAL EVALUATION OF ORGANIC COMPOUNDS DECOMPOSITION IN CONTINUOUS SUPERCRITICAL WATER REACTOR
Igor Novoselov*, Brian Pinkard, David Gorman, Kartik Tiwari, Per Reinhall, John Kramlich
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KR4 IMPROVING KINETIC MODELS OF CELLULOSE HYDROLYSIS IN SUPERCRITICAL WATER.
Luís Vaquerizo *, Nerea Abad-Fernández *, Rafael B. Mato *, María José Cocero *
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Oral

OR01 COMMERCIAL ORGANIC CHEMICAL WASTE DESTRUCTION USING SUPERCRITICAL WATER OXIDATION
John Follin
Director, Strategic Development, Supercritical Water Oxidation Products, General Atomics, San Diego, USA

OR02 PRESSURIZED FLUID PROCESSING: FROM BY-PRODUCTS TO VALUE-ADDED PRODUCTS
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OR03 VALORISATION OF SPENT COFFEE GROUNDS USING SUBCRITICAL WATER
Bruno Pedras1, Susana Barreiros1, Alexandre Paiva1* and Pedro Simões1
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OR04 HOW TO ADD VALUE TO WASTE HAZELNUT SHELL BY USING SUBCRITICAL WATER AS A REACTION MEDIUM?
Aslı Yüksel*, Gökalt Gözaydın
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OR05 CANCELLED
OR06 HYDROTHERMAL OXIDATION OF FERMENTATION FILTRATE FOR USE IN A REGENERATIVE LIFE SUPPORT SYSTEM
D. Zhang¹, F. Ronsse¹, A. Luther², P. Clauwaert²,
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OR07 EXPERIMENTAL, KINETIC AND THERMODYNAMIC STUDIES OF THE SYNTHESIS OF 5-HYDROXYMETHYLFLURFURAL FROM BIOMASS IN HIGH PRESSURE/HIGH TEMPERATURE CO2-WATER SYSTEM
Hélène Labauzea,b*, Bouchra Benjelloun-Mlayahb, Séverine Camyb, Jean-Stéphane Condoretb
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OR08 SUBCRITICAL WATER BASED TECHNOLOGIES FOR EXTRACTION PROCESSES AND BIOMASS CONVERSION : A REVIEW
Benoît Legros¹, Karine Seaudeau¹,³*, Christian Guizard¹, Stéphane Sarrade¹,²
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OR09 EXPERIMENTAL AND ECONOMICAL CASE STUDY: COMPETITIVE LIGNIN BIOREFINERY BY COMBINING HIGH PRESSURE HYDROLYSIS AND EXTRACTION
L.Andersen¹, M.Conrad², J.Gil³, E.U.Hartge³, H.Häring³, X.Hu³, C.Kreft³, R.Meyer³, W.Reynolds³,
L.M.Schmidt⁴, C.Zetzl³, S.Heinrich⁴, M.Kaltschmitt⁶, C.Lim⁵, I.Smirnova³
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OR10 LIGNIN DEPOLYMERIZATION FROM SUBCRITICAL TO SUPERCRITICAL WATER
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OR11 CELLULOSE DISSOLUTION-HYDROLYSIS-DEHYDRATION OVER SOLID ACID CATALYSTS IN SUBCRITICAL WATER AND WATER/ORGANIC SYSTEMS
Nikolay V. Gromovª,ª*, Andrey S. Chikunovª, Tatiana B. Medvedevaª, Irina S. Yakovlevaª, Lubov A. Isupovaª, Cyril Aymonierª, Oxana P. Taranª, Valentin N. Parmonª,Š
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OR12 BIOREFINING OF CANOLA STRAW USING PRESSURIZED AQUEOUS ETHANOL: NANOSIZED CELLULOSE
Raquel Razzera Huerta a and Marleny D.A. Saldaña a,*,
a Department of Agricultural, Food and Nutritional Science, University of Alberta, Edmonton, Canada
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OR13 WET AIR OXIDATION vs ELECTRO-OXIDATION : COMPARISON BETWEEN TWO CLEAN PROCESSES FOR TREATMENT OF HIGHLY CONCENTRATED AQUEOUS WASTE.
Jean-François Vermette, Patrick Desjardins and Pedro Ramirez
Centre de Transfert Technologique en Ecologie Industrielle, Sorel-Tracy, Canada

OR14 ASYMMETRIC ORGANO-CATALYSIS IN LIQUID OR SUPERCRITICAL CARBON DIOXIDE MEDIA
Ilya V. Kuchurov,* Evgeniya V. Filatova, Olga V. Turova, S. G. Zlotin
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OR15 LIMONENE CARBONATE PRODUCTION FROM CO2: CONTINUOUS FLOW CATALYSIS WITH INTEGRATED PRODUCT SEPARATION
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OR16 HIGH-PRESSURE HYDROGEN PRODUCTION FROM FORMIC ACID AND THE SEPARATION OF H2/CO2 UNDER HIGH-PRESSURE CONDITIONS
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OR17 CO-ELECTROLYSIS OF CARBON DIOXIDE AND WATER IN A PRESSURIZED ELECTROLYSER
Sofia Messias a, Carmen M. Rangel b, Tiago Pardal c, Manuel Nunes da Ponte a, Ana S. Reis Machado a*
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THERMODYNAMICS – TRANSPORT PROPERTIES (T)

Keynote

KT1 SPECIFICS OF THERMOPHYSICAL PROPERTIES AND HEAT TRANSFER AT SUPERCRITICAL Pressures in Power-Engineering Applications
Igor L. Pioro
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Oral

OT01 CALCULATION OF SOLUBILITY OF SUPERCritical FLUIDS in AMorphous and Glassy POLYMERS
Margarete Roericht, Sabine Enders
KIT, Institut für Technische Thermodynamik und Kältetechnik, Karlsruhe (Germany)
OT02 CO2 + METHANOL + GLYCEROL: DETERMINATION OF THE COMPOSITIONS IN VLLLE FROM A SYNTHETIC METHOD-BASED EXPERIMENT/THEORETICAL PROCEDURE
Gonçalo V. S. M. Carrera,* Manuel Nunes da Ponte*a
a LAQV - REQUIMTE - Faculdade de Ciências e Tecnologia, Univ. Nova de Lisboa Caparica, Portugal.
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OT03 ON THE SOLUBILITY OF CHITOSAN IN AQUEOUS ACETIC ACID AND PRESSURIZED (CARBON DIOXIDE + WATER)
Camilo Pardo-Castaño and Gustavo Bolaños*
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OT04 SUPERCritical PSEuDO-BOILING
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OT05 MEASUREMENT AND CORRELATION OF METAL COMPLEXES IN HIGH TEMPERATURE SUPERCRITICAL CARBON DIOXIDE
Toshitaka Funazukuri1, Minoru Yomamoto1, Yuki Ohkubo1, Junichi Sakabe1, Chang Yi Kong2
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OT06 EFFECT OF NONFLUORINATED SURFACTANTS’ HYDROPHILIC TAILS ON CO2-IN-WATER (C/W) EMULSION STABILIZATION
Lei Bao, Shuyi Fang, Dongdong Hu, Yuan Zong, Ling Zhao, Weikang Yuan, Tao Liu*
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OT07 VISCOSITY OF SQUALANE SATURATED WITH CARBON DIOXIDE MEASURED WITH ACOUSTIC LEVITATION AND CAPILLARY RHEOMETRY
Judith Kremer1, Vincent Bürk1, Stefan Pollak1, Andreas Kilzer2, Marcus Petermann1
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OT08 APPARENT CONTACT ANGLE OF OLEIC ACID AND TRIOLEIN ON A REVERSE OSMOSIS MEMBRANE IN SC-CO2 ENVIRONMENT
Karina Araus, Eileen Santos, Ricardo Couto, Feral Temelli*
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POSTERS

CHROMATOGRAPHY (C)

PC01 INFLUENCE OF THE ADDITIVES ON THE RETENTION OF ANALYTES ON THE POLAR STATIONARY PHASES UNDER CONDITIONS OF SUPERCRITICAL FLUID CHROMATOGRAPHY
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ENERGY-FUELS (E)

PE01 EFFECT OF MODIFIERS ON SUPERCRITICAL CARBON DIOXIDE EXTRACTION OF BITUMEN
Heidi L. Cossey *, Selma E. Guigard *, Eleisha Underwood *, Warren H. Stiver *
Jennifer McMillan and Sujit Bhattacharya *
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PE02 THE EFFECT OF TEMPERATURE, PRESSURE AND MODIFIER ON THE INITIAL SOLUBILITY OF WASTE STREAM BITUMEN IN SUPERCRITICAL CARBON DIOXIDE
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PE03 LEACHING OF SOME TURKISH COALS WITH SUBCRITICAL WATER AND ORGANIC ACIDS
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PE04 THE KINETICS OF THE UPGRADING OF HEAVY OIL IN SUPERCRITICAL METHANOL
Jimoon Kang, Youn-Woo Lee *, Aye Aye Myint, Seungjae Sim, Jonghyeon Kim, Won Bae Kong
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EXTRACTION - FRACTIONATION PROCESSES (NF)

PF01 GAS TO LIQUID RATIO OPTIMIZATION FOR THE REDUCTION OF ETHANOL RESIDUE FOR THE PRODUCTION OF LIPOSOMES WITH A SUPERCRITICAL ASSISTED TECHNIQUE
P. Trucillo, R. Campardelli *, M. Scognamiglio, E. Reverchon
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PF02 RECOVERY OF CARBOXYLIC ACIDS FROM DILUTE AQUEOUS SOLUTIONS USING SUPERCRITICAL CO2 PACKED COLUMN
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THE APPLICATIONS OF SUPERCRITICAL FLUID SIMULATED MOVING BED TO THE SEPARATION OF NATURAL PRODUCTS
Ming-Tsai Liao1,1, Chih-Hsiung Lin1, Xiao-Qing Bao1, Ru-Chen Liang2
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SUPERCRITICAL FLUID PROPANE-BUTANE MIXTURE IN REFINERY AND PETROCHEMISTRY
1,V.F. Khairutdinov,1,2 F.M. Gumerov,2 M.I. Farakhov
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ELIMINATING GLUTARALDEHYDE FROM CROSSLINKED COLLAGEN FILMS USING SUPERCRITICAL CO2
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SULPHUR TERPENOID CONCENTRATION BY COUNTER-CURRENT FRACTIONATION: A FEASIBILITY STUDY
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THE SEPARATION OF DETERGENT RANGE ALKANES AND ALCOHOLS: SUPERCRITICAL FLUIDS AS THE GREEN ALTERNATIVE SOLVENT
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ARTIFICIAL NEURAL NETWORKS AS TOOL FOR SFE PROCESS OPTIMIZATION
Branimir Pavlić1,2,*, Oskar Bera1,*, Zoran Zeković1,2
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MATERIALS (PM)

RAMAN- AND PARTIAL MOLAR RAMAN SPECTROSCOPY FOR THE DETECTION OF NANOSTRUCTURED SYSTEMS
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PM02 SYNTHESIS AND CHARACTERIZATION OF ALGINATE/INULIN AEROGEL MACROSFERES USING SUPERCRITICAL FLUID TECHNOLOGY
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PM03 PRODUCTION OF AEROGELS USING A BIODEGRADABLE POLYMER: MATHEMATICAL MODELING OF SUPERCRITICAL DRYING
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PM04 NANOCELLULAR FOAMING WITH RAPID DEPRESSURIZATION SYSTEM FROM 100 MPA
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PM05 FOAMING OF POLY(ETHYLENE-CO-VINYL ACETATE) AND POLY(ETHYLENE-CO-VINYL ACETATE-CO-CARBON MONOXIDE) AND THEIR BLENDS WITH CARBON DIOXIDE
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PM06 CONFINED FOAMING OF POLYMERS IN SUPERCRITICAL CARBON DIOXIDE
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PM07 INFLUENCE OF ULTEM AND POLYHEXAFLUOROPROPYLENE THIN FILMS SWELLING IN SUPERCRITICAL CARBON DIOXIDE ON THEIR GAS SEPARATION PROPERTIES
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PM08 ENVIRONMENTALLY SAFE ROUTE FOR PRODUCING REDISPERSIBLE POLYMER POWDERS AND INVESTIGATION OF MATERIALSBASED ON THEM
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PM09 PHOTOCOMACTIVE INTERPEENETRATING POLYMER NETWORK AS INTELLIGENT DRUG DELIVERY SYSTEM FABRICATED BY SUPER CRITICAL CARBON DIOXIDE TECHNOLOGY
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PM10: AND CO$_2$ ADSORPTION ISOTHERMS OF MICRO AND MESOPOROUS MATERIALS CRYSTALLIZED IN SCCO$_2$

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PM11: NEAR CRITICAL AND SUPERCRITICAL IMPREGNATION OF CLOVE ESSENTIAL OIL IN LLDPE FILMS: STABILITY AND KINETIC STUDY

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PM12: PRODUCTION OF MATERIALS WITH ANTIMICROBIAL PROPERTIES BY A COMBINED EXTRACTION AND IMPREGNATION PROCESS

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PM13: SYNTHESIS OF CURCUMINOID-MOFs: COMPARISON BETWEEN SUPERCRITICAL CO$_2$ AND SOLVOTHERMAL METHODS

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PM14: CRYSTALLIZATION OF NANOSTRUCTURED CURCUMIN MOF IN SUPERCRITICAL CO$_2$

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PM15: PRODUCTION OF Β-CAROTENE/PVP COPRECIPITATES USING SUPERCRITICAL ASSISTED ATOMIZATION

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PM16: SALBUTAMOL SPHERICAL PARTICLES FORMATION BY SUPERCRITICAL ANTISOLVENT PRECIPITATION

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PM17: ELABORATION OF PLA-BASED BIOCOMPOSITE FOAMS

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PM18 IN SITU AND EX SITU CHARACTERIZATIONS OF C/C COMPOSITES PREPARED UNDER HIGH PRESSURE AND HIGH TEMPERATURE CONDITIONS
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PM19 A NEW STRATEGY FOR THE SYNTHESIS OF SILICON nanoparticles IN SUPERCRITICAL MEDIUM
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PM20 XAFS STUDY FOR FORMATION MECHANISM OF nanoparticles IN SUPERCRITICAL WATER
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PM21 GAS ANTISOLVENT METHOD (GAS METHOD) FOR CRYSTALLIZATION OF METAL-ORGANIC COORDINATION COMPLEXES
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PM22 PREPARATION OF LIPOSOMES ENCAPSULATING Z-ISOMERIZED β-CAROTENE USING SUPERCRITICAL CARBON DIOXIDE WITH ULTRASONICATION
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PM23 SUPERCRITICAL CO\(_2\)-ASSISTED FLOW CHEMISTRY FOR SYNTHESIZING SWITCHABLE MOLECULAR NANOMATERIALS
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PM24 DECELLULARIZED EXTRACELLULAR MATRIX USING LIQUEFIED DIMETHYL ETHER FOR TISSUE ENGINEERING/REGENERATIVE MEDICINE
Shogo Suzuki\(^1\), Satoshi Shinohara\(^1\), Shogo Torii\(^1\), Hideki Kanda\(^2\), Motonobu Goto\(^2\), Tsuyoshi Kimura\(^3\), Akio Kishida\(^3\)
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PM25 PREPARATION OF PGX-DRIED GUM ARABIC AND ITS LOADING WITH COQ10 BY ADSORPTIVE PRECIPITATION
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PM26  SUPERCritical ANtISOLVENT COPRECIPITATION OF PVP/KETOPROFEN MICROPARTICLES
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PM27  STUDY OF THE NANO STRUCTURE AND FORMATION MECHANISM OF COMPOSITE MICROPARTICLES PRODUCED BY SAA
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PM28  ANTIOXIDANT LOADED NANOEMULSIONS ENTRAPPED IN LIPOSOMES PRODUCED WITH A SUPERCRITICAL ASSISTED TECHNIQUE
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PM29  POROUS AND SAFE OCULAR IMPLANTS DEVELOPED BY SCCO2 FOAMING/MIXING FOR INCREASED DEGRADATION RATES
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PM30  FORMATION OF THE MULTIFUNCTIONAL METAL-POLYMER COMPOSITE WITH ANTISEPtic, ANESTHETIC AND BACTERICIDAL PROPERTIES BY GREEN TECHNOLOGIES
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PM31  AEROGELEX: ENABLING AEROGEL TECHNOLOGY TRANSLATION FOR CARE, LIFE SCIENCE, NUTRITION AND PHARMACEUTICAL MARKETS
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PM32  FIRST EVIDENCE OF SOLVENT SPILLAGE UNDER SUBCRITICAL CONDITIONS IN AEROGEL PRODUCTION
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PM33  INVESTIGATION OF PHENOMENA RELATED TO SUPERCRITICAL IMPREGNATION OF POLYMERIC INTRAOCULAR LENSES WITH ANTIBIOTICS TO PREVENT CATARACT POSTOPERATIVE ENDOPHTHALMITIS
Kanjana ONGKASIN*, Yasmine MASMOUDI*, Martial SAUCEAU*, Gwenaelle LEBOURDON*, Thierry TASSAING*, Jacques FAGES*, Elisabeth BADENS*
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PM34 3D AEROGELS OF 2D LAMINAR NANOSTRUCTURES BY SUPER_CRITICAL CO₂
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PM35 ALGINATE AEROGELS FOR TEXTILE APPLICATIONS
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PM36 A SUPER_CRITICAL CO₂ PROCESS FOR THE PRODUCTION OF VINYL FUNCTIONALISED POLYMER PARTICLES
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PM37 PRELIMINARY OPTIMIZATION OF SUPER_CRITICAL DECELLULARIZATION
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PM38 SYNTHESIS OF TRANSLUCENT CHITOSAN AEROGEL AND ITS HYDROPHOBIC MODIFICATION
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PM39 FUNCTIONALIZATION OF NANOCELLULOSIC STRUCTURED MATERIALS IN SUPER_CRITICAL CARBON DIOXIDE FOR ANTIMICROBIAL WOUND DRESSINGS DESIGN
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PM40 DEVELOPMENT OF DRY POWDER FORMULATIONS CONTAINING ANTIBACTERIAL COMPOUNDS
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PM41 NOVEL POLYVINYL ALCOHOL AEROGEL FOR EFFICIENT REMOVAL OF MOISTURE FROM GASEOUS STREAMS
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PM42 SUPER_CRITICAL CARBON DIOXIDE: A NON-AQUEOUS CLEANING AGENT IN SURFACE PREPARATION OF POLYMERS BY INCREASING THE SURFACE ENERGY
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NATURAL PRODUCTS (PN)

PN01 APPLICATION OF WINTER SAVORY EXTRACTS OBTAINED BY SFE AND HYDRODISTILLATION AS FOOD PRESERVATIVES
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PN02 THE VARIABILITY OF COMPONENT COMPOSITION OF NIGELLA SATIVA L. SUPERCRITICAL CO2 EXTRACT DEPENDING ON SOIL-CLIMATIC CONDITIONS
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PN03 COMPONENT COMPOSITION OF SUPERCRITICAL EXTRACT OF AERIAL PARTS OF ROSMARINUS OFFICINALIS L. FROM THE COLLECTION OF THE BOTANICAL GARDEN OF PYATIGORSK MEDICO-PHARMACEUTICAL INSTITUTE
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PN04 INTEGRATED PROCESSES APPLIED TO OBTAIN BIOPOTENTIAL EXTRACTS FROM PAPAYA SEEDS
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PN05 THE EFFECT OF RAW MATERIAL PREPARATION ON THE SUPERCRITICAL FLUID EXTRACTION OF THE OIL FROM ORANGE PEEL
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PN06 SUPERCRITICAL CO2 EXTRACTION OF NEUTRAL LIPIDS FROM NANNOCYCHLOROPSIS MARITIMA & NANNOCYCHLOROPSIS SALINA: EXPERIMENTS AND MODELLING
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PN07 APPLICATION OF A HIGH PRESSURE BIOREFINERY CASCADE FOR CREATING ADDED VALUE ON JATROPHA PRESSCAKE AND SHELLS
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PN08 SUPERCRITICAL CO2 FRACTIONATION APPLIED TO AN AQUEOUS SUSPENSION OF CHLORELLA VULGARIS MICROALGAE
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PN09 BIOREFINING OF BUCKWHEAT FLOWERS AND EUROPEAN GOLDENROD LEAVES BY SUPERCRITICAL CARBON DIOXIDE AND PRESSURIZED LIQUID EXTRACTION
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PN10 EXTRACTION OF GELATIN FROM BIGEYE TUNA SKIN: EFFECT OF ACID PRETREATMENT IN SUPERCRITICAL CARBON DIOXIDE
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PN11 RECOVERING POLYSACCHARIDE INCLUDING BETA-GLUCAN FROM GRIFOLA FRONDOSA BY PRESSURIZED HOT WATER
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PN12 CANNABIS EXTRACTION BY SUPERCRITICAL CO₂: STATE OF ART AND FUTURE PERSPECTIVES
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PN13 EXTRACTION OF OIL FROM RUBBER TREE (HEVEA BRASIILIENSES) SEED SHELL USING SUPERCRITICAL FLUID
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PN14 SUPERCRITICAL EXTRACTION OF CHRYSOBALANUS ICACO OIL WITH CO₂: A PRELIMINARY STUDY
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PN15 MATHEMATICAL MODELING OF PINK PEPPER (S. TEREBINTHIFOLIUS RADDI) SUPERCRITICAL CO₂ EXTRACTION
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PN16 ANNATTO SEED OIL FRACTIONATION BY SEQUENTIAL SUPERCRITICAL CO₂ EXTRACTION
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Stability of mushroom polyphenol oxidases and horseradish peroxidases under supercritical carbon dioxide

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Supercritical fluid extraction of 6-methoxyeugenol from Piper hispidinervum

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Process study of caffeine supercritical extraction from yerba-mate

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Pressure effect on ginger essential oil extraction by supercritical carbon dioxide and steam distillation

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Study of cosolvent effect to obtain extracts from Achyrocline Satureioides and its potential in perfumery industry

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Encapsulation of laurel leaves essential oil (Laurus nobilis L.) by supercritical fluid extraction of emulsion (SFEE)

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Effect of temperature under the co-precipitation of the extract from blackberry residue through supercritical antisolvent process

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Supercritical fluid extraction of coumarins from Pterocaullon balansae: mathematical modeling and evaluation of antifungal properties

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PN25 REMOVAL OF TANNINS FROM FABA BEAN HULL USING SUBCRITICAL WATER
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PN26 MODIFIED BARLEY STARCH FOR RUTIN LOADING IN SUBCRITICAL WATER MEDIA
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PN27 DESODORISATION AND DISCOLORATION OF LIPIDIC AND AQUEOUS LIQUIDS BY SUPERCRITICAL CO2
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PN28 SUPERCRITICAL FLUID EXTRACTION OF EUGENIA PYRIFORMIS LEAVES
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PN29 MICROALGAE BIOREFINERIES AND SUSTAINABILITY: THE ROLE OF COMPRESSED FLUIDS
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PN30 RECOVERY OF NATURAL-BASED PIGMENTS FROM MARINE CRUSTACEAN WASTE STREAMS USING SUPERCRITICAL FLUID TECHNOLOGY
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PN31 CARBON DIOXIDE EXPANDED ETHANOL EXTRACTION OF ASTAXANTHIN FROM MICROALGAE
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PN32 SUPERCRITICAL FLUID EXTRACTION OF HIGH VALUE LIPIDS FROM CANNED SARDINE WASTE STREAMS
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PN33 EXTRACTION AND ENCAPSULATION OF ALGAE DERIVED PRODUCTS USING SUPERCRITICAL FLUID TECHNOLOGY
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ON FISH WASTE AS A HUMAN HEALTH ENHANCER - SUSTAINABLE PROCESSES FOR PREBIOTICS PRODUCTION
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TEMPERATURE GRADIENTS WITHIN THE PACKED BED AFFECT CUMULATIVE SUPERCRITICAL CO2 EXTRACTION PLOTS FOR OILSEEDS
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SUB-CRITICAL ETOH EXTRACTION OF ROSE HIP SEEDS: CHEMICAL COMPOSITION AND PROCESS OPTIMIZATION
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DEOILING SPENT BLEACHING CLAYS FROM EDIBLE OIL REFINING INDUSTRIES BY SUPERCRITICAL CO2
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EXTRACTION OF BORIC ACID FROM ULEXITE MINERAL BY SUPERCRITICAL CO2
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EXTRACTION AND FRACTIONATION OF CANNABINOIDS FROM CANNABIS SATIVA
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WETTING BEHAVIOR OF CORN OIL ON STAINLESS STEEL SURFACE UNDER DENSE NITROGEN AND CARBON DIOXIDE
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PRODUCTION OF FUNCTIONAL FOOD INGREDIENTS USING SUB-CRITICAL WATER
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PN42 EXTRACTION OF STILBENES FROM WINE INDUSTRY WASTES
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PN43 ACTIVE INGREDIENT RELEASE FROM POROUS MATRICES TO CONTROL THE INSECT VECTOR OF PINE WILT DISEASE
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EQUIPMENT (PQ)

PQ01 DESIGN OF HIGH PRESSURE EQUIPMENT FOR SUPERCritical DRYING
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PQ02 A TRANSPARENT MICRO-DEVICE TO STUDY MASS TRANSFER AND THERMODYNAMICS IN TWO-PHASE FLOWS AT HIGH PRESSURE
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PQ03 HYDRAULIC POWER IN THE SCF PILOT SCALE SYSTEMS FROM CONCEPT TO REALIZATION
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REACTIONS (PR)

PR01 EFFECT OF HIGH-PRESSURE CO2 ON POLYURETHANE SYNTHESIS
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PR02 SYNTHESIS OF POLY(GLYCOLIDE-CO-E-CAPROLACTONE) IN SUPercRITICAL CARBON DIOXIDE
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PR03 HYDROTHERMAL CONVERSION OF SACCHAROSE IN WATER FROM AMBIENT TO SUPERCRITICAL CONDITIONS – AN IN SITU RAMAN ANALYSIS
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PR04 SUBCRITICAL WATER HYDROLYSIS OF RICE HUSK FOR OBTAINING FERMENTABLE SUGARS
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PR05 CATALYTIC HYDROGENATION OF FUMARIC ACID TO 1,4-BUTANEDIOL IN SUPERCRITICAL CO₂ BY RUTHENIUM, PALLADIUM AND IRIDIUM
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PR06 PHYSICO-CHEMICAL AND BIOFUNCTIONAL PROPERTIES OF SHRIMP (PENAEUS JAPONICUS) HYDROSOLYSATES OBTAINED FROM SUBCRITICAL WATER TREATMENT
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PR07 HYDROTHERMAL OXIDATION: THE NEXT GENERATION FOR ABATEMENT OF UNRECYCLABLE WASTE OF HAZARDOUS NATURE AND COMPLEX COMPOSITION
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PR08 NOXYCLEAN™: A COMPACT CLEAN UNIT FOR THE DISINFECTION AND DESTRUCTION OF HEALTH-CARE WASTES
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PR09 A MOBILE PILOT PLANT FOR SUPERCRITICAL WATER OXIDATION OF PCB-CONTAMINATED TRANSFORMER OIL
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PR10 COMPUTATIONAL MODELING OF MIXING AND GASIFICATION OF GLYCEROL IN CONTINUOUS FLOW SUPERCRITICAL WATER REACTOR
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PR11 SUPERCRITICAL WATER HYDROLYSIS OF MODEL ORGANIC COMPOUNDS WITH IN-SITU PROCESS MONITORING
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PR12 FRACTIONATION OF HIGH LIGNIN CONTENT BIOMASS BY SUPERCRITICAL WATER ULTRAFAST HYDROLYSIS
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PR13 ACTIVITY AND STABILITY OF B-GALACTOSIDASE IN SC CO₂
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PR14 HYDROLYSIS OF CASSAVA STARCH, CHITOSAN AND THEIR MIXTURES IN SUBCRITICAL WATER MEDIA
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PR15 HYDROGENOLYSIS OF LIGNINE IN SUPERCRITICAL ETHANOL. THE INFLUENCE OF NATURE OF CATALYST ACTIVE SITES AND REDUCING AGENT
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THERMODYNAMICS-TRANSPORT PROPERTIES (PT)

PT01 FLUID PHASE BEHAVIOR UNDER SUPERCRITICAL CONDITIONS OF BINARY SYSTEMS IN PRESENCE OF IMIDAZOLIUM AND AMMONIUM IONIC LIQUIDS
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PT02 THE THERMODYNAMIC PROPERTIES OF NORMAL HEPTANE IN THE CRITICAL REGION
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PT03 DENSITIES AND PHASE EQUILIBRIA OF SUPERCRITICAL HYDROGEN, PROPANE AND VEGETABLE OIL MIXTURES. EXPERIMENTAL DATA AND THERMODYNAMIC MODELING
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PT04 INVESTIGATION OF THE EFFECT OF DIFFERENT THERMODYNAMIC HYDRATE INHIBITORS ON THE FORMATION OF CARBON DIOXIDE HYDRATE BY RAMAN SPECTROSCOPY
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PT05 SEPARATION OF DETERGENT RANGE ALKANES AND ALCOHOLS WITH SUPERCRITICAL FLUIDS: TERNARY AND MULTICOMPONENT PHASE BEHAVIOUR
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PT06 NON-INVASIVE DETERMINATION OF CO2-SOLUBILITIES IN INDUSTRIALLY RELEVANT POLYOLS AND ISOCYANATES AT ELEVATED Pressures

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PT07 PHASE EQUILIBRIA OF 1,4-BUTANEDIOL IN SUPERCRITICAL CO2

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PT08 THERMAL CHARACTERIZATIONS AND MELTING POINT DEPRESSION OF COPOLYMERS OF ETHYLENE, VINYL ACETATE, AND CARBON MONOXIDE AND THEIR BLENDS IN CO2 AT HIGH PRESSURES

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PT09 SPECTRAL ANALYSIS OF IONIC LIQUIDS + SOLVENT MIXTURES AND SOLUTIONS FROM EXTRACtIONS OF BAMBOO WITH IONIC LIQUID + ETHANOL MIXTURES AT HIGH Pressures

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PT10 THERMODYNAMIC MODELING AND SIMULATION AT HIGH- PressURES OF BINARY SYSTEMS CONTAINING BIODIESEL COMPONENTS: DIFFERENT TYPES OF THE PENG-ROBINSON EQUATION OF STATE VS ARTIFICIAL NEURAL NETWORKS

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PT11 TOWARDS A BETTER UNDERSTANDING OF SIMULATING THE MULTICOMPONENT SOLUBILITY OF NATURAL EXTRACTS IN SUPERCRITICAL CARBON DIOXIDE

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PT12 CORRELATIONS FOR BINARY DIFFUSION COEFFICIENTS OF SOLUTES IN SUPERCRITICAL FLUIDS AND LIQUIDS USING HYDRODYNAMIC EQUATION WITH MOLECULAR VOLUME

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PT13 THERMODYNAMIC AND MASS TRANSFER DATA FOR MATERIAL PROCESSING USING SUPERCRITICAL FLUIDS

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PT14 VOLUMETRIC PROPERTIES AND VISCOSITY OF IMIDAZOLIUM BASED IONIC LIQUIDS WITH VARYING ALKYL FUNCTIONAL GROUPS AND THEIR MIXTURES WITH ETHANOL UNDER PRESSURE

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PT15 INVESTIGATIONS OF HYDRODYNAMIC BEHAVIOR IN HIGH PRESSURE MICROFLUIDIC SYSTEMS
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PT16 PRESSURE VERSUS TEMPERATURE ISOCORIC-ISOPLETHIC TRAJECTORIES FOR BINARY AND TERNARY SYSTEMS RELATED TO THE SUPERCRITICAL HYDROGENATION OF POLYBUTADIENE
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PT17 MODELIZATION OF THE SUPERCRITICAL CARBON DIOXIDE SOLUBILITY OF CAROTENOIDS AND CHLOROPHYLL USING HANSEN THEORY
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PT18 EFFECT OF MOLECULAR WEIGHT OF CO₂-PHILIC ADDITIVES ON CO₂ DIFFUSION IN POLYSTYRENE MICROCELLULAR FOAMING
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PT19 HIGH-PRESSURE PHASE EQUILIBRIUM STUDIES OF MULTICOMPONENT (ALCOHOL+WATER+IONIC LIQUID+CO₂) SYSTEMS
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