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Monolithic and shrinkage-free hydrophobic silica aerogels via new rapid supercritical extraction process

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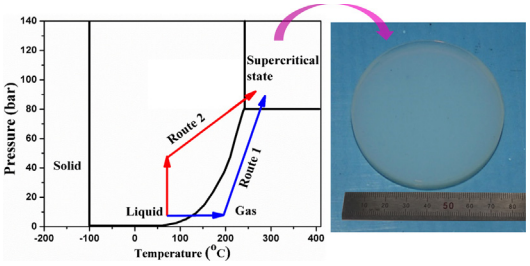

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Production of lysozyme microparticles to be used in functional foods, using an expanded liquid antisolvent process

Valentina Prosapio, Ernesto Reverchon, Iolanda De Marco

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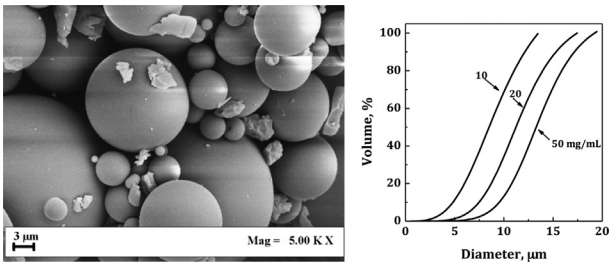

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Enantiomeric separation of 1,4-dihydropyridines by liquid-phase microextraction with supercritical fluid chromatography

Lisha Zhang[a,b], Zhaorui Song[a,b], Yaqing Dong[a,b], Yufen Wang[a,b], Xiaogang Li[a,b], Hao Long[a,b], Kun Xu[a,b], Chuan Deng[a,b,c], Meng Meng[a,b], Yongmei Yin[a,b], Rimo Xi[a,b]

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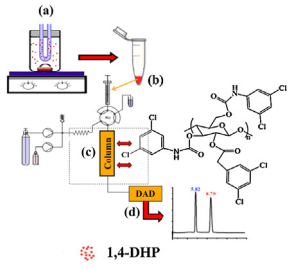

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Extraction of *Dracocephalum kotschyi Boiss* using supercritical carbon dioxide: Experimental and optimization

Gholamhossein Sodeifian, Seyed Ali Sajadian, Nedasadat Saadati Ardestani

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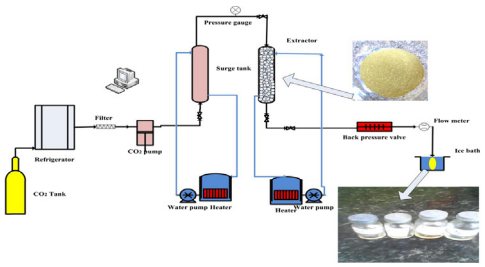

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Measurement and prediction of desorption behavior of five volatile organic compounds (acetone, n-hexane, methanol, toluene, and n-decane) from activated carbon for supercritical carbon dioxide regeneration

Naoto Takahashi[a], Ikuo Ushiki[a,b], Yuri Hamabe[a], Masaki Ota[a], Yoshiyuki Sato[a], Hiroshi Inomata[a]

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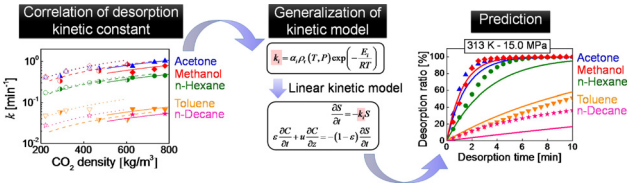

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Supercritical and high pressure subcritical fluid extraction from Lemon balm (*Melissa officinalis* L., Lamiaceae)

Aleksandra Bogdanovic[a], Vanja Tadic[b], Ivana Arsic[c], Stoja Milovanovic[a], Slobodan Petrovic[a], Dejan Skala[a]

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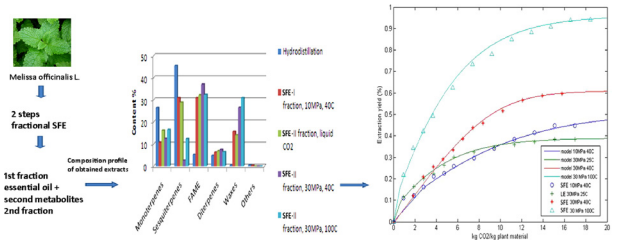

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Influence of temperature and pressure on hydrogen and methane production in the hydrothermal gasification of wood residues

Nihal Üremek Cengiz, Seda Eren, Mehmet Sağlam, Mithat Yüksel, Levent Ballice

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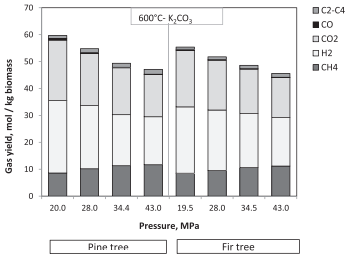

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Extraction of bioactive compounds from cob and pericarp of purple corn (*Zea mays* L.) by sequential extraction in fixed bed extractor using supercritical CO_2, ethanol, and water as solvents

Yaneth M. Monroy[a], Rodney A.F. Rodrigues[b], Adilson Sartoratto[b], Fernando A. Cabral[a]

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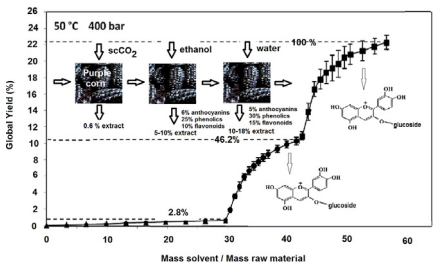

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Extraction of phytochemicals from saffron by supercritical carbon dioxide with water and methanol as entrainer

Hazuki Nerome[a], Mika Ito[a], Siti Machmudah[b], Wahyudiono[a], Hideki Kanda[a,c], Motonobu Goto[a]

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Extraction amount by SC-CO_2 extraction (Area$_{Component}$/Area$_{Internal\ standard}$ [-])

Components	Temperature [°C]			Pressure [MPa]			Optimum conditions
	40	60	80	20	30	40	
Picrocrocin	0.744	1.260	2.419	1.400	2.419	1.292	80°C/30 MPa
HTCC	0.154	0.263	0.313	0.130	0.313	0.569	80°C/40 MPa
Safranal	0.012	0.061	0.091	0.053	0.091	0.279	80°C/40 MPa
α-crocin	4.466	18.025	21.921	10.534	21.921	9.061	80°C/30 MPa
Deglycosylated crocin	2.468	10.970	13.020	4.773	13.020	5.789	80°C/30 MPa

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Supercritical fluid extraction followed by nanostructured supramolecular solvent extraction for extraction of levonorgestrel and megestrol from whole blood samples

Fatemeh Rezaei[a], Yadollah Yamini[a], Hamid Asiabi[a], Shahram Seidi[b], Maryam Rezazadeh[a]

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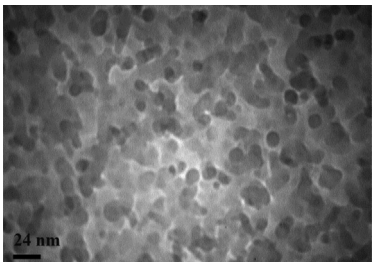

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Catalytic supercritical water gasification of microalgae: Comparison of *Chlorella vulgaris* and *Scenedesmus quadricauda*

Laura Tiong[a], Masaharu Komiyama[a], Yoshimitsu Uemura[b], Tien Thanh Nguyen[b]

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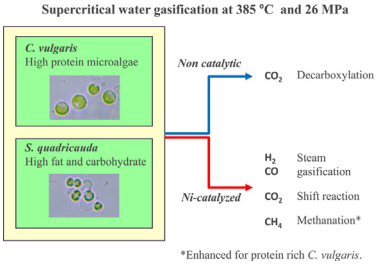

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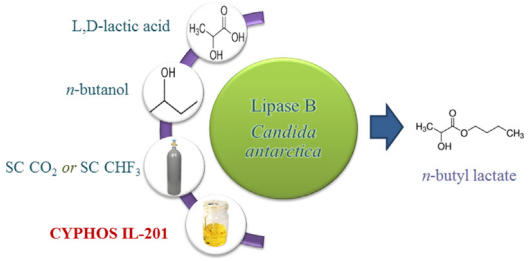
Enzyme-catalyzed esterification of D,L-lactic acid in different SCF/IL media

Mateja Primožič, Sabina Kavčič, Željko Knez, Maja Leitgeb

University of Maribor, Faculty of Chemistry and Chemical Engineering, Laboratory for Separation Processes and Product Design, Smetanova 17, 2000 Maribor, Slovenia



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Volume translation methods for real-gas computational fluid dynamics simulations

Jan Matheis[a], Hagen Müller[b], Cornelia Lenz[a], Michael Pfitzner[b], Stefan Hickel[a,c]

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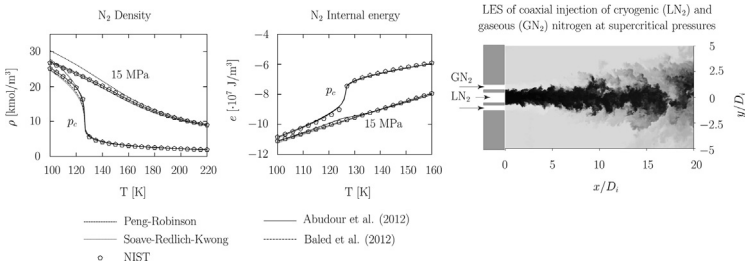

Transport Properties

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Experimental investigation on heat transfer and pressure drop of supercritical water flows in an inclined rifled tube

Alireza Taklifi, Pedram Hanafizadeh, Mohammad Ali Akhavan Behabadi, Abbas Aliabadi

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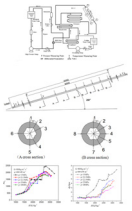

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Impact of surface roughness and humidity on X70 steel corrosion in supercritical CO_2 mixture with SO_2, H_2O, and O_2

Minghe Xu[a], Qian Zhang[b], XiaoXian Yang[a], Zhe Wang[a], Jianmin Liu[b], Zheng Li[a]

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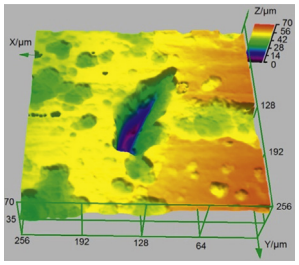

Extractions

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Microwave pretreatment of *Moringa oleifera* seed: Effect on oil obtained by pilot-scale supercritical carbon dioxide extraction and Soxhlet apparatus

Carla Da Porto, Deborha Decorti, Andrea Natolino

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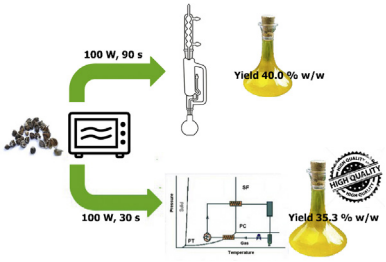

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Supercritical carbon dioxide extraction of *Trigonella foenum-graecum* L. seeds: Process optimization using response surface methodology

Aleksandra Bogdanovic[a], Vanja Tadic[b], Marko Stamenic[a], Slobodan Petrovic[a], Dejan Skala[a]

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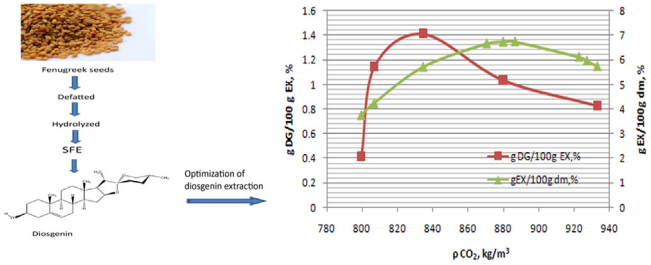

Particle Formation

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Synthesis of alkali niobate $K_{1-x}Na_xNbO_3$ nanoparticles using a supercritical water flow system

Suguru Toyama[a], Hiromichi Hayashi[b], Masafumi Takesue[c], Masaru Watanabe[c], Richard L. Smith Jr.[a,c]

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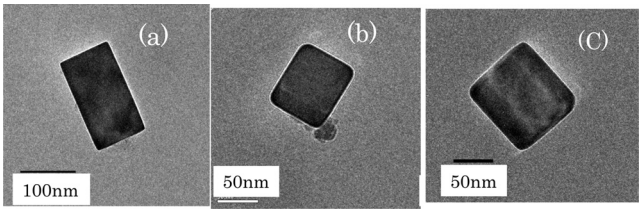

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Supercritical fluid micronization techniques for gastroresistant insulin formulations

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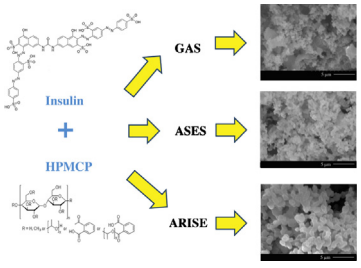

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Tetracycline nanoparticles precipitation using supercritical and liquid CO_2 as antisolvents

Tae Jun Yoon, Won-Su Son, Hee Jeong Park, Bumjoon Seo, Taewan Kim, Youn-Woo Lee

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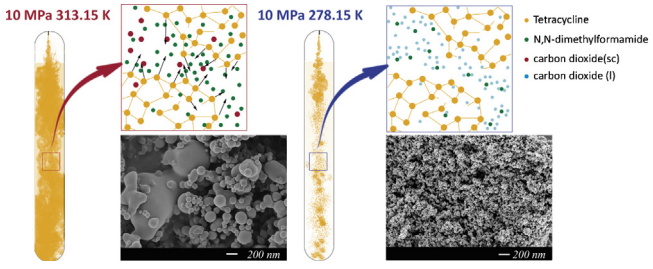

Optimization of graphene production by exfoliation of graphite in supercritical ethanol: A response surface methodology approach

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Alireza Hadi[a], Javad Karimi-Sabet[b], Seyed Mohammad Ali Moosavian[a], Sohrabali Ghorbanian[a]

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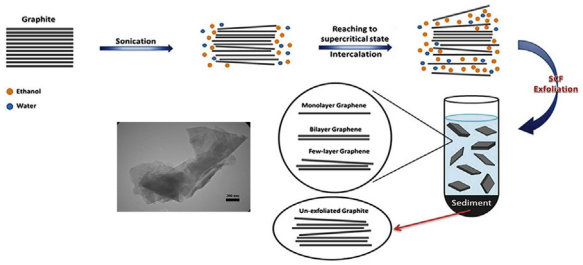

Efficient encapsulation of proteins in submicro liposomes using a supercritical fluid assisted continuous process

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Roberta Campardelli[a], Islane Espirito Santo[a,b], Elaine Cabral Albuquerque[b], Silvio Vieira de Melo[b], Giovanna Della Porta[a], Ernesto Reverchon[a]

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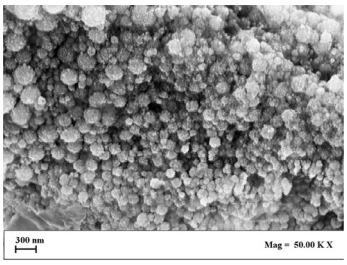

Study of simple microparticles formation of limonene in modified starch using PGSS – Particles from gas-saturated suspensions

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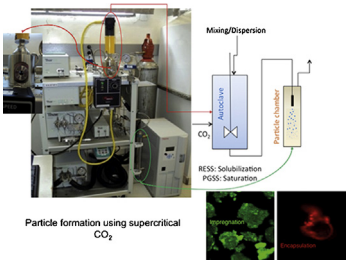

Evaluation of changes in physicochemical properties in a supercritical antisolvent (SAS) process using 3D turbulent CFD approach

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F.A.R. Cardoso[a], R.A. Almeida[b], R.V.P. Rezende[c], H.F. Meier[d], D. Noriler[d], H.P. Guerra[d], V.F. Cabral[b], L. Cardozo-Filho[b]

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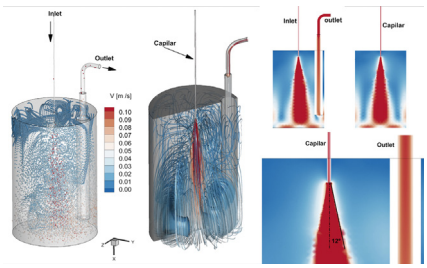

Activity of immobilized lipase from *Candida antarctica* (Lipozyme 435) and its performance on the esterification of oleic acid in supercritical carbon dioxide

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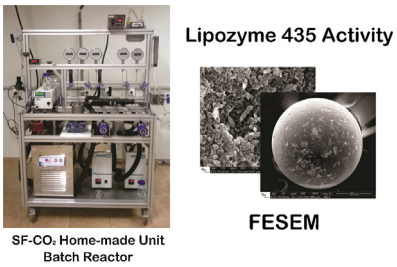

Unusual transformations of aliphatic nitro compounds in a flow reactor in high-pressure isopropanol on alumina. Part 2. Formation of esters

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V.P. Sivcev[a], K.P. Volcho[b,c], N.F. Salakhutdinov[b,c], V.I. Anikeev[a]

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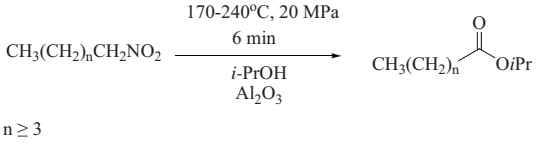

Hydrothermal conversion of Ulva macro algae in supercritical water

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Y. Graz[a,b], S. Bostyn[a], T. Richard[a,b], P. Escot Bocanegra[c], E. de Bilbao[b], J. Poirier[b], I. Gokalp[a]

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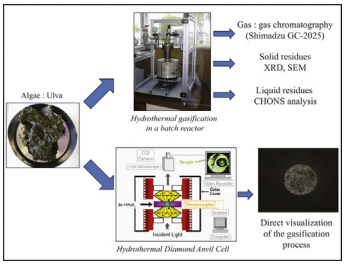

Hot surface ignition of oxygen–ethanol hydrothermal flames

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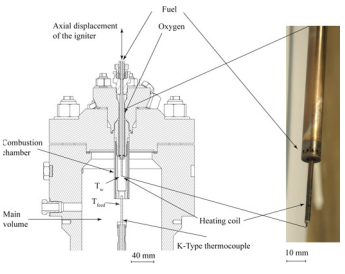

Preparation and characterization of simvastatin nanoparticles using rapid expansion of supercritical solution (RESS) with trifluoromethane

The Journal of Supercritical Fluids, 107 (2016) 469

Alborz Fattahi[a], Javad Karimi-Sabet[b], Ali Keshavarz[a], Abooali Golzary[c], Morteza Rafiee-Tehrani[a], Farid A. Dorkoosh[a]

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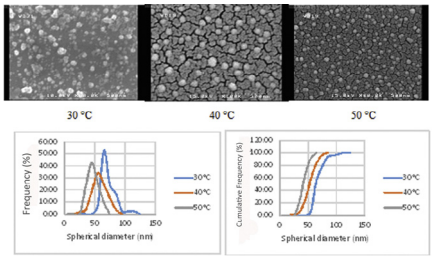

The role of supercritical water on the rapid formation of ZSM-5 nanocatalyst

The Journal of Supercritical Fluids, 107 (2016) 479

Morteza Hosseinpour[a], Hadi Amiri[a], Seyed Javad Ahmadi[b], Mohammad Ali Mousavian[a]

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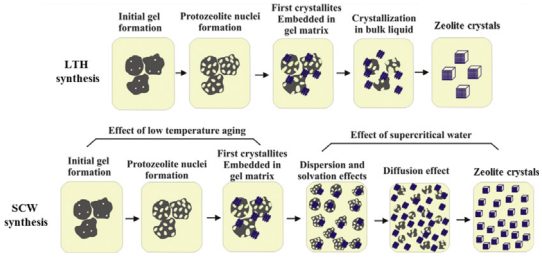

Supercritical CO_2 sorption kinetics and thymol impregnation of PCL and PCL-HA

The Journal of Supercritical Fluids, 107 (2016) 486

Jasna Ivanovic[a], Sandra Knauer[b], Alejandra Fanovich[c], Stoja Milovanovic[a], Marko Stamenic[a], Philip Jaeger[b], Irena Zizovic[a], Rudolf Eggers[d]

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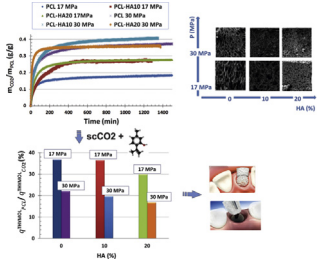

Extraction of kerogen from oil shale with supercritical carbon dioxide: Molecular dynamics simulations

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Tiantian Wu[a,b], Qingzhong Xue[a,b], Xiaofang Li[b], Yehan Tao[b], Yakang Jin[b], Cuicui Ling[b], Shuangfang Lu[c]

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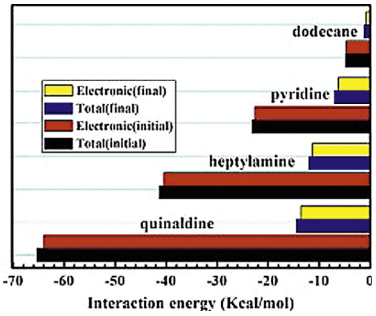

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Effect of cosolvents (ethyl lactate, ethyl acetate and ethanol) on the supercritical CO_2 extraction of caffeine from green tea

David Villanueva Bermejo, Elena Ibáñez, Guillermo Reglero, Tiziana Fornari

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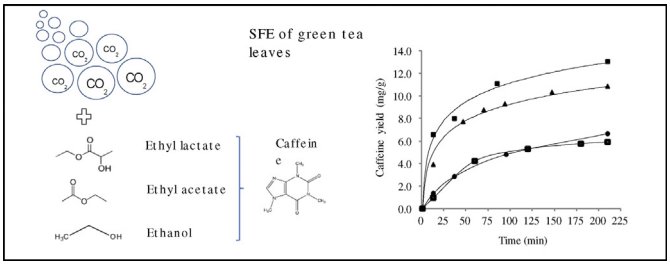

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Supercritical fluid immobilization of horseradish peroxidase on high surface area mesoporous activated carbon

Akshay Jain[a], Veronica Ong[a], Sundaramurthy Jayaraman[a], Rajasekhar Balasubramanian[b], M.P. Srinivasan[c]

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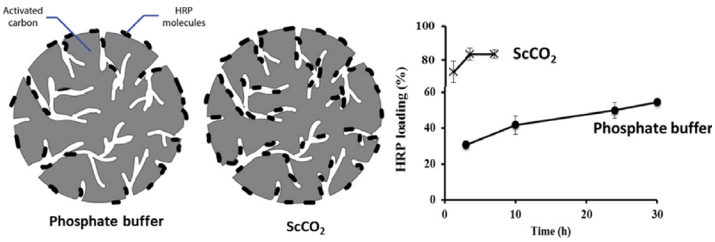

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Chiral analysis of aromatic amino acids in food supplements using subcritical fluid chromatography and Chirobiotic T2 column

Laura Sánchez-Hernández, José L. Bernal, María Jesús del Nozal, Laura Toribio

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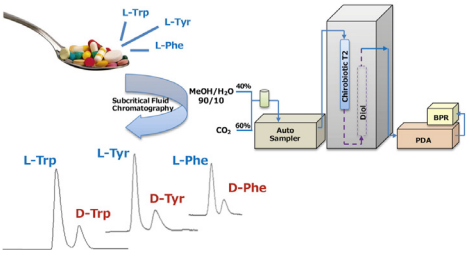

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A mathematical model and numerical investigation for glycerol gasification in supercritical water with a tubular reactor

Hui Jin[a], Simao Guo[a], Liejin Guo[a,b], Changqing Cao[a]

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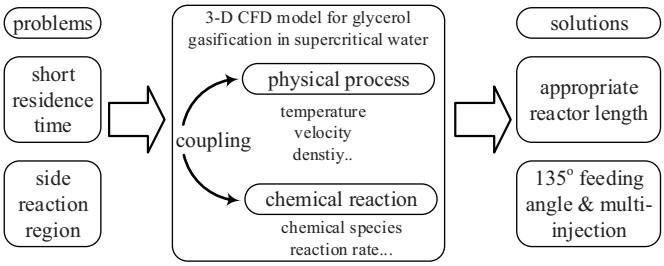

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Curcumin-loaded solid lipid particles by PGSS technology

André São Pedro[a,b], Stefania Dalla Villa[b], Paolo Caliceti[c], Silvio A.B. Vieira de Melo[a], Elaine Cabral Albuquerque[a], Alberto Bertucco[b], Stefano Salmaso[c]

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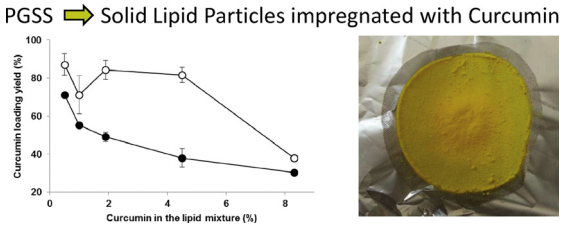

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Effect of operational parameters on the performance of carbonated water injection: Experimental and numerical modeling study

Mohammad Ali Ahmadi[a,b], Mahdi zeinali Hasanvand[c], Sara Shokrollahzadeh Behbahani[d], Alireza Nourmohammad[b], Akram Vahidi[b], Mojtaba Amiri[e], Goodarz Ahmadi[f]

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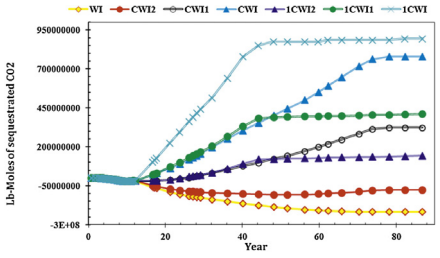

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Mixed convection on a vertical plate in supercritical fluids by selecting the best equation of state

Danyal Rezaei Khonakdar[a], Mohammad Reza Raveshi[b]

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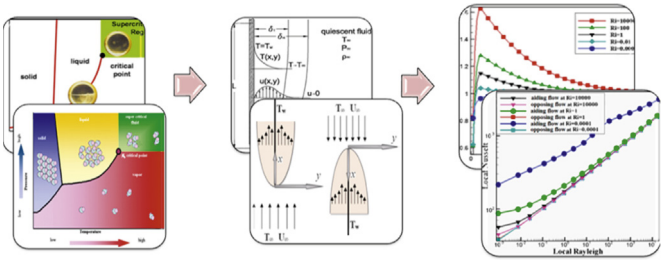

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Advantages of supercritical fluid extraction for recovery of squalene from wine lees

Eleni Naziri[a], Sandra B. Glisic[b], Fani Th. Mantzouridou[a], Maria Z. Tsimidou[a], Viktor Nedovic[c], Branko Bugarski[b]

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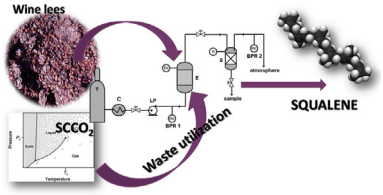

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Performance of reverse osmosis and nanofiltration membranes in the fractionation and retention of patchouli essential oil

Adriana Donelian[a], Patrícia F. de Oliveira[a], Alírio E. Rodrigues[b], Vera G. Mata[b], Ricardo A.F. Machado[a]

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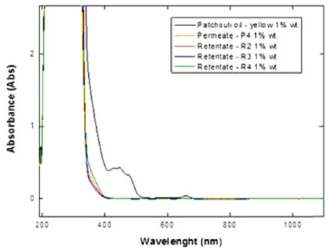

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Influence of surface modifications and channel structure for microflows of supercritical carbon dioxide and water

S. Knaust, M. Andersson, K. Hjort, L. Klintberg

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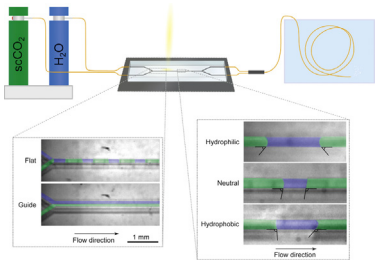

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The phase behavior in supercritical carbon dioxide of hyperbranched copolymers with architectural variations

Paweł G. Parzuchowski[a], Jacek Gregorowicz[b], Edyta P. Wawrzyńska[a], Dominik Wiącek[a], Gabriel Rokicki[a]

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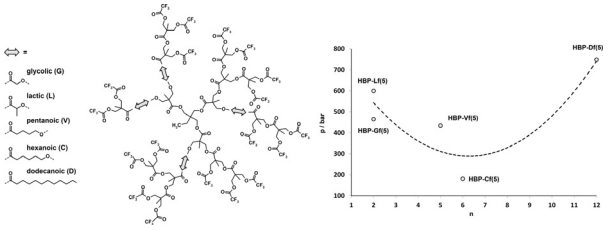

The Journal of Supercritical Fluids, 107 (2016) 669

Inactivation of mushroom polyphenoloxidase in model systems exposed to high-pressure carbon dioxide

Lara Manzocco[a], Alexandra Ignat[a], Fabio Valoppi[a], Krystel Rita Burrafato[a], Giovanna Lippe[a], Sara Spilimbergo[b], Maria Cristina Nicoli[a]

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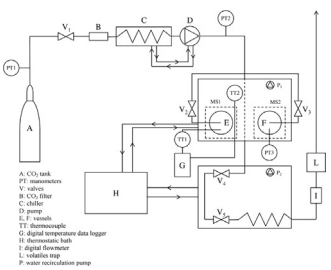

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Experimental measurement and thermodynamic modelling of hydrate phase equilibrium conditions for krypton + *n*-butyl ammonium bromide aqueous solution

Saeedeh Babaee[a], Hamed Hashemi[a], Amir H. Mohammadi[a,b,c], Paramespri Naidoo[a], Deresh Ramjugernath[a]

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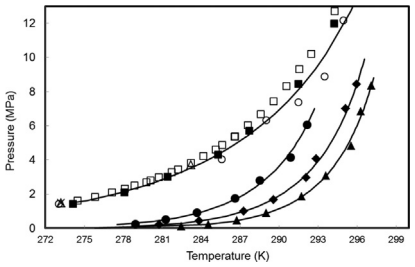

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Techno-economic optimization of the subcritical fluid extraction of oil from *Moringa oleifera* seeds and subsequent production of a purified sterols fraction

Pedro F. Martins, M.M.R. de Melo, C.M. Silva

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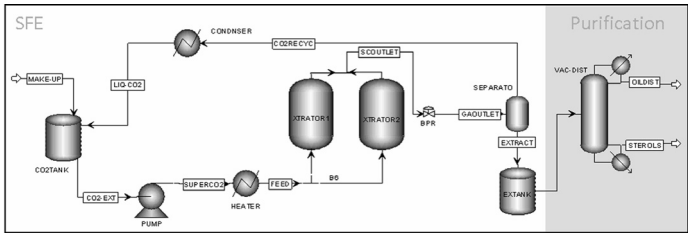

The Journal of Supercritical Fluids, 107 (2016) 690

Measurement and modeling of tracer diffusivities of α-pinene in supercritical CO_2, and analysis of their hydrodynamic and free-volume behaviors

Raquel V. Vaz, Ana L. Magalhães, Anabela A. Valente, Carlos M. Silva

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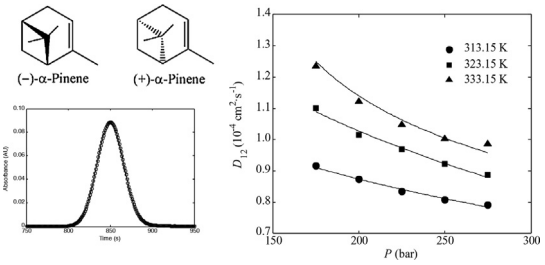

The Journal of Supercritical Fluids, 107 (2016) 699

An investigation into the formation and conversion of metal complexes to metal oxide nanoparticles in supercritical water

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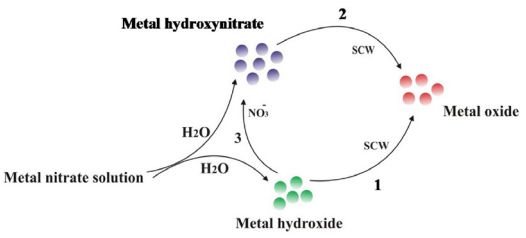

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Conversion of brown coal continuously supplied into the reactor as coal–water slurry in a supercritical water and water–oxygen mixture

Anatoly A. Vostrikov[a,b], Andrey V. Shishkin[a,b], Mikhail Ya. Sokol[a], Dmitriy Yu. Dubov[a,b], Oxana N. Fedyaeva[a]

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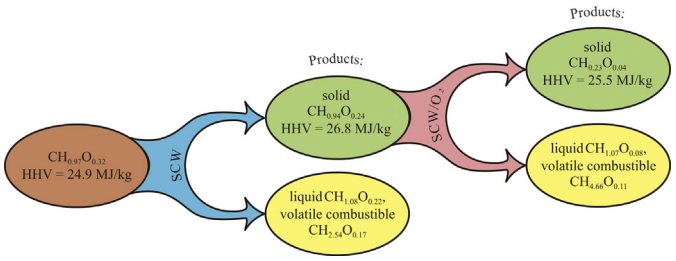

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Mesoporous spherical silica encapsulating Pd nanoparticles prepared by CO_2-induced mircoemulsion and catalytic application in Suzuki coupling reaction

Li Guo, Xiuge Zhao, Ran Zhang, Chen Chen, Jizhong Chen, Angjun Chen, Xuerui Liu, Zhenshan Hou

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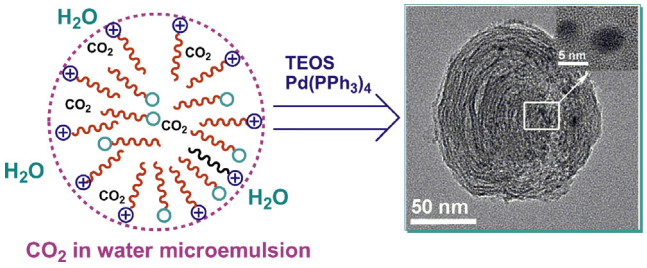

The Journal of Supercritical Fluids, 107 (2016) 723

Sub and supercritical water reforming of n-hexadecane in a tubular flow reactor

Y.M. Alshammari, K. Hellgardt

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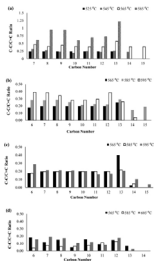

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Experimental and simulation study of the physical foaming process using high-pressure CO_2

Ying Sun, Yumi Ueda, Hiroyuki Suganaga, Masashi Haruki, Shin-ichi Kihara, Shigeki Takishima

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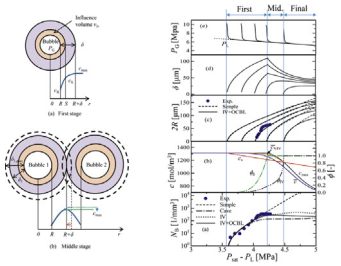

The Journal of Supercritical Fluids, 107 (2016) 746

In situ X-ray diffraction for millisecond-order dynamics of $BaZrO_3$ nanoparticle formation in supercritical water

Akira Yoko[a], Makoto Akizuki[a], Naohisa Hirao[b], Shinji Kohara[c], Mukesh Kumar[d], Naoto Umezawa[d], Takahisa Ohno[d], Yoshito Oshima[a]

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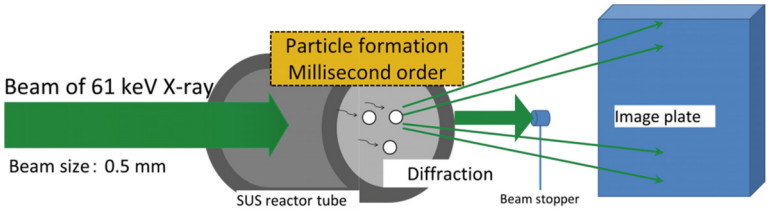

The Journal of Supercritical Fluids, 107 (2016) 753

Measurement of solid solubilities of diuron in supercritical carbon dioxide and analysis of recrystallization by using the rapid expansion of supercritical solutions process

Jhih-Long Ciou, Chie-Shaan Su

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