Scientific article

Diacon A., Călinescu I., Vinatoru M., Chipurici P., Vlaicu Alex., Boscornea C. and Mason T.J., "Fatty Acid Ethyl Esters (FAEE): **A New, Green and Renewable Solvent for the Extraction of Carotenoids from Tomato Waste Products** *Molecules* (2021) 26: 4388;  [<https://doi.org/10.3390/molecules26144388>](https://doi.org/10.3390/molecules26144388)

Staicu, V, ; Luntraru, C; Calinescu, I ; Chisega-Negrila, CG; Vinatoru, M; Neagu, M ; Gavrila, AI; Popa, I ; “**Ultrasonic or Microwave Cascade Treatment of Medicinal Plant Waste**” Sustainability, vol.13, no.22, <https://doi.org/10.3390/su132212849> ; WOS:000806947700001

Gavrila A., Zalaru C., Tatia R., Seciu-Grama Ana-Maria, Negrea C., Calinescu I., Chipurici P., Trifan A., Popa I. „Green Extraction Techniques of Phytochemicals from Hedera helix L. and In Vitro Characterization of the Extracts”, Plants 2023, 12(22), 3908; <https://doi.org/10.3390/plants12223908>

Accepted for publication:

* Claudia-Maria Simonescu, Petre Chipurici, Ioan Călinescu, Mircea Vînătoru, Elişoara Narcissa Toma, Daniela Cristina Culiţă, Vladimir-Lucian Ene, Timothy J. Mason „Effects of ultrasounds and microwaves on the morphology and adsorption capacity of calcium alginate” ‚Colloids and Surfaces A: Physicochemical and Engineering Aspects’ - COLSUA-D-23-06965R1

Under review:

* Vasile Staicu, Ioan Calinescu, Mircea Vinatoru and Ioana Popa „The efficient extraction of β-carotene from sea buckthorn berries with FAEE using a combination of ultrasound and microwaves” „Plants” MDPI - FQS-2023-325

Papers presented at conferences

**Ultrasound and microwave – the advantages and limitation of combined use**

Ioan Calinescu, Mircea Vinatoru -

 5th International Caparica Conference on Ultrasonic-based Applications: from analysis to synthesis 2021, Caparica – Portugal , 31th – 03rd June 2021

**Ultrasonic pretreatment of vegetal material to increase the extraction yield of bioactive compounds**

Adina Ionuta Gavrila, Ioan Calinescu, Ioana Popa, Christina Marie Zalaru –

5th International Caparica Conference on Ultrasonic-based Applications: from analysis to synthesis 2021, Caparica – Portugal , 31th – 03rd June 2021

• I.Călinescu, M.Vinatoru, T.Mason; "**A flexible hybrid reactor for simultaneous application of ultrasound and microwave radiation** ", 17th Meeting of the European Society of Sonochemistry, 2022

• M.Vinatoru, T.Mason, I.Călinescu ; „**20 Years of Ultrasonically Assisted Biodiesel Synthesis**”; 17th Meeting of the European Society of Sonochemistry, 2022

• Claudia-Maria Simonescu, „**Sinteze verzi de adsorbanţi ai ionilor metalelor grele din ape uzate**”, Workshop: "Abordări moderne ale feedbackului între procese de mediu și schimbările climatice“, Galaţi 6-9 iulie 2022;

• Ionut Bârzu, Elişoara Toma, Ioan Călinescu, Petre Chipurici, Claudia-Maria Simonescu ; “**Adsorbţia competitivă a ionilor metalelor grele din ape uzate**”, Workshop: "Abordări moderne ale feedbackului între procese de mediu și schimbările climatice“, Galaţi 6-9 iulie 2022;

• Mason T.J „**Cavitation – An engineering problem that has become a novel energy source**”, Sichem 2022

• Vinatoru M. „**Sonichemistry – some applications**”, Sichem 2022

• Calinescu Ioan „**Simultaneous use of microwave and ultrasound – reactor and applications**” , Sichem 2022;

• Mocanu A., Rusen E., Toader G., Diacon A., Dirloman F., Matache L.C., „Mechanical performance of adhesives based on polyols from depolymerization of lignocellulose biomass” International Conference on Advanced Materials - ICAM 2023, Iordania, 22-24 mai 2023; <https://www.just.edu.jo/>

Patents

Calinescu Ioan, Vinatoru Mircea, Popa Ioana, Diacon Aurel, „Produs natural complex destinat prevenirii bolilor oculare și cardiovasculare și procedeu de obținere a acestuia” , A/00034/2023