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49th International Symposium on Essential Oils (ISEO2018)
Book of Abstracts



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Book:

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Book, part of:

G.R. Mettam, L.B. Adams, 2009. How to prepare an electronic version of your article, in: B.S. Jones, R.Z. Smith (Eds.), Introduction to the Electronic Age. E-Publishing Inc., New York, pp. 281–304.

Conference proceedings:

A. Holmes-Siedle, L. Adams and G. Ensell, MOS dosimeters-improvement of responsivity, *Proc. 1st European Conf. on Radiation and its Effects on Devices and Systems (RADECS 91), Montpellier, France*, 1991, pp. 65-69.

Bulletin or Reports:

R.M. Perkin, 1999. *Feature models in Virtual Product Development*, Report ECRC/M1677, Capenhurst, England.

Thesis:

M.L. Reed, *Si-SiO_2 interface trap anneal kinetics*, Ph. D. Thesis, Stanford University, Stanford, 1987.

Patents:

R. Wu, 1982. *Drying Systems*, US Patent No. 4359826.

Others:

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Software

Accelrys Software Inc., 2013. Discovery Studio Visualizer, Release 4.0, San Diego: Accelrys Software Inc.

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49th ISEO

WELCOME

On behalf of the Organizing Committee, it is my great pleasure to welcome you to the 49th International Symposium on Essential Oils (ISEO2018).

Over the years, this prestigious annual symposium has developed into a unique meeting arena between leading experts, academic and industry scientists involved in the essential-oil research and representatives of the essential-oil industry from all around the world. The 49th ISEO will feature plenary lectures and presentations of cutting-edge science of essential oils from a diverse group of scientists in the fields of natural product isolation, organic synthesis, chemometrics, chemical biology, biosynthesis, pharmacology and analytical methodology development. Recent advances and future trends in the application of essential oils and their constituents in the fragrance industry, pharmacy, cosmetology, food production and agriculture will be highlighted, as well. The meeting will provide opportunities for in-depth scientific discussions and sharing unpublished results in both formal and informal settings.

Although ISEO symposia have a tradition of nearly half a century, it will take place in Serbia for the first time. Niš is the third largest city in Serbia, situated on the river of Nišava and represents a cultural, economic, administrative, business and university center of southeastern Serbia. For centuries, an important geographical and strategic position of the town has determined its destiny, so this region was inhabited by the Romans, Goths, Illyrians, Celts, Ottomans, Slavs, etc. Alongside rich cultural and historical heritage, southeastern Serbia has a unique natural beauty with two stunning gorges surrounded by picturesque Suva planina mountain characterized by exceptional biological diversity.

Many geographers, travelers, and historians considered the city of Niš as a gateway between the East and West, and we will set this as our main goal–to unify scientists from universities, research centers and industry from all over the world and to join different cultures and knowledge together.

ISEO2018 abstracts are published in the Special Issue of *Facta Universitatis: Series Physics, Chemistry and Technology*, a scientific journal published by the University of Niš since 1986. The outstanding contributions presented at the ISEO2018 Symposium (plenary lectures, oral and poster presentations) will enjoy the opportunity of having their full work published in the *Food & Chemical Toxicology* Special Issue dedicated solely to the "Toxicity of essential oils and their constituents".

I wish all of the ISEO2018 participants a highly successful and enjoyable symposium and many unforgettable memories of your stay in Niš, Serbia. Thank you for joining us at this meeting!

Dr Niko Radulović
The President of the ISEO2018 Organizing Committee

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PP50. Composition of the essential oil of the Balkan endemic *Thymus longedentatus* (Degen & Urum.) Ronniger

Ina Aneva[1]*, Milena Nikolova[1], Antoaneta Trendafilova[2], Milka Todorova[2]

Keywords: thyme, medicinal plant, aromatic plant

The genus *Thymus* comprises more than 250 species of perennial herbaceous or fruticose plants, classified into 8 sections. A total of 66 species with numerous subspecies and varieties are listed in the Flora Europaea. All species are considered important medicinal and aromatic plants. Twenty species grow spontaneously in Bulgaria. *Thymus longedentatus* is distributed only in the eastern part of the Balkan Peninsula (Bulgaria, Greece and Turkey), inhabiting sunny rocky habitats, mainly on limestone. Samples of this taxon were collected in the region of the Eastern Rhodopes. The essential oils were extracted from dried plant material by hydrodistillation using a Clevenger-type system and analyzed by gas chromatography coupled with mass spectrometry. The essential oils were characterized by a lemon-like odor due to the prevalence of citral isomers: neral (27.5%) and geranial (30.2%). Additionally, eucalyptol (7.8%), *trans*-β-ocimene (7.5%), germacrene D (4.4%) and β-myrcene (3.7%) were among other more abundant constituents of the oil. The remaining compounds were present in smaller percentage. Twenty-eight compounds comprising 98.2% of the total GC-areas detected were identified in the oil.

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