

THE WAVE



The newsletter publication of the International Microwave Power Institute

December 2017



Keynote Speakers Announced for IMPI 52 Symposium; Call for Papers Deadline Quickly Approaching

The 52nd Annual Microwave Power Symposium (IMPI 52) will be held at the Hilton Hotel in Long Beach, California, USA from June 26-28, 2018. IMPI 52 will feature 2 keynote addresses, a short course on Modeling, a Spotlight Session on Industrial Microwave & RF Applications, oral and poster presentations, panel discussions, various networking opportunities and a full exhibition hall.

Lora Spizzirri, VP of Research & Development for 915 Labs will give a keynote address on Wednesday, June 27th, “**Microwave Food Processing - Reinventing Packaged Food.**” Spizzirri will explore why Microwave Assisted Thermal Sterilization (MATS) and Microwave Assisted Pasteurization (MAPS) are game-changing food process technologies, born from a research consortium led by Washington State University. MATS/MAPS technology has the potential to disrupt the food industry by helping to solve some of its most challenging problems. These include food insecurity, food waste, supply chain inefficiency and lack of convenient, packaged, fresh-tasting food. Companies such as Amazon view this technology as an important enabler to providing direct-to-consumer, healthy meals. MATS is a thermal process using microwave energy to rapidly reach sterilization temperature in the packaged product. As a result, the flavor, texture and color lost in traditional thermal sterilization processes is maintained and high quality, preservative-free foods or beverages can be produced.

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PRESIDENT'S MESSAGE

In 1966, when IMPI's founders wrote our charter and planned its formation, they wisely knew that, to be considered a serious scientific organization, required that it have its own publication. Thus was born JMPEE (the Journal Of Microwave Power And Electromagnetic Energy), IMPI's crown jewel. During its 52 years of existence, it has published many seminal papers in areas encompassing industrial applications, microwave ovens, power from space, microwave hyperthermia, and much more. It has had a distinguished array of editors beginning with Professor Geoffrey Voss in 1966, to today's Editor-in-Chief, Professor Juan Aguilar-Garib. Originally published only in hard copy (there was no Internet then), today it is available both in hard copy and electronic form.

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IMPI 52 SYMPOSIUM CONTINUED

The technology can also be used for pasteurization (MAPS) enabling shelf life extension of chilled products. This presentation will cover the commercial aspects of MATS/MAPS technology and how the application of technology development can fulfill industry needs and build economic value.

The keynote address on Thursday, June 28th will be given by Dr. Brad Hoff, a Senior Research Physicist, with the United States Airforce Research Laboratory. Dr. Hoff's keynote entitled, "**Millimeter wave interactions with high temperature materials and their application to power beaming**" will examine the Air Force Research Laboratory's (AFRL) involvement in ongoing efforts to characterize dielectric properties of materials at high temperatures using millimeter wave radiation. This research supports AFRL's work toward a far-field W-band power beaming demonstration. Dr. Hoff will describe ongoing basic research efforts at the Air Force Research Laboratory and provide an overview AFRL's millimeter wave power beaming research program.

The full program will be released in late February following the review of all abstracts submitted via our 2018 Call for Papers. IMPI Members and encouraged to submit an abstract by the January 26, 2018 deadline. The [2018 Call for Papers](#) has information on the topic areas, student competition, venue and much more.

A Short Course on Modeling will be offered from 8am-12pm on Tuesday June 26th. The Short Course will be taught by Dr. Vadim Yakovlev of Worcester Polytechnic Institute. The IMPI 52 Symposium will officially kick off at 1:00pm on Tuesday, June 26th with a Spotlight Session dedicated to Industrial Microwave and RF Applications. A welcome Reception will be held that evening. The program will continue for the full day on Wednesday June 27th run until 3pm conclude at 3pm on Thursday, June 28th. [Registration is now open.](#)

The [Exhibition Packages](#) and [Sponsorship Packages](#) are now available for download. New this year, companies or individuals may wish to participate in our [Student Sponsorship Program](#). For \$1,000, you can sponsor a student's participation in IMPI 52. Eligible students must submit an abstract by the January 26th deadline. Additional details on this program are available in the link above.

Regular updates on the IMPI 52 Symposium can be found at <http://impi.org/symposium-short-courses/>



Lora Spizzirri, 915 Labs LLC



Dr. Brad Hoff, AFRL

PRESIDENTS MESSAGE CONTINUED

Several years ago, IMPI contracted with the Taylor and Francis Group (UK) to manage the publication and distribution of the Journal while IMPI maintains editorial control. In the past year, JMPEE has been accessed by researchers in 69 countries; abstract views are up by 166% to 57,541; and full article downloads are up by 428%, to 5444. So JMPEE remains an outstanding peer-reviewed scientific journal and continues to grow.

When the Internet was born, it was seen as a great means of communication, and soon many scientific and technical journals were published online rather than hard copy, creating open-access journals that promoted the spread of scientific and technical information in a manner never seen before. But then spam came along and brought with it misinformation and misuse of this universal information-forum. Today, there is a crisis in the publication of open-access scientific literature, namely the rise of online "predatory journals", that disguise themselves as the real thing, e.g. there is the Journal of Economics and Finance, published by Springer, but now there is also the Journal of Finance and Economics – a predatory publication. There is the Journal of Engineering Technology, published by the American Society for Engineering Education, but now there is another: GSTF Journal of Engineering Technology, a predatory publication. These predatory journals are not peer-reviewed, and may even pretend to hold world-class symposia, which they don't. I'm sure many of you have been bombarded by blast emails offering to publish your paper in one of these predatory publications, and the unsuspecting person who submits such a paper may later receive an invoice from the company for \$1,000 or more for publishing the paper. In this era of "publish or perish", in which academics careers largely depend upon the number of publications they can show on their CVs, these predatory companies find many authors willing to submit papers in order to gain promotions.

This situation has become even worse due to the hijacking of the entire web addresses, i.e. Internet domains, and erecting false versions of these sites, also hijacking their journals along with their web traffic, something known as "website spoofing". The hijackers method is to build a convincing version of the website at a similar address, e.g. www.sciencemag.org - rather than <http://www.sciencemag.org> (the real site). In a 2015 article by John Bohannon, he noted 24 recently snatched journal domains, so this is a serious situation and one that Molly and I discussed with Richard Goodman, JMPEE Managing Editor, Taylor and Francis Group who has assured us of the company's close observation and control of potential problems.

We are all very proud of JMPEE and are working hard to maintain its high standards. The number of papers submitted to the Journal has increased and Juan, our Editor-In-Chief, is happy with his relationship with Taylor and Francis. However, during a discussion with Richard Goodman, we learned that only a small percentage of IMPI members take advantage of reading the Journal in its online form, a benefit open to all members. I know that much of the Journal may not appeal to your own interests, however, I guarantee that you can find much that will interest you, including in the Archives., and, of course, it's an essential vehicle for keeping up with what's going on, and what has gone on, in our field.

This is the final issue of this year's Newsletter, so let me thank you all for your support, and wish you a wonderful Holiday Season and a Very Happy New Year!



Bob

CALENDAR OF EVENTS

52nd Annual Microwave Power Symposium (IMPI 52) The Hilton Hotel, Long Beach, California, USA, June 26-28, 2018. Call for Papers [available here](#).

IMPI's Fall Short Course 2018 will be held October 24-26 at Campbell's Soup Company Headquarters in Camden, New Jersey, USA. Our Welcome Reception, Group Dinner and hotel block will take place in downtown Philadelphia, PA. Transportation to and from Camden will be included in your registration. Save the date and look for more details on this flagship event early next year!

Do you have an event you want us to publish? Contact molly.poisant@impi.org to have your event highlighted.

IMPI MEMBER NEWS

IMPI President, Bob Schiffmann, has co-authored a new book, "Microwave Chemical And Materials Processing – A Tutorial" (ISBN 978-981-10-6465-4), published by Springer Nature. This is a technical book describing the theory and methodology behind many microwave-assisted chemical reactions, as well as describing the use of microwave energy for the processing of many materials. It also includes a history of the development of the commercial use of microwave energy. His co-authors are:

- Satoshi Horikoshi, U. Sophia, Tokyo Japan
- Jun Fukushima, Tohoku University, Sendai Japan
- Nick Serpone, U. di Paviá

Do you have news to share with your IMPI Community? IMPI Members are encouraged to email molly.poisant@impi.org if you have a book published, receive a promotion or award or want to share an accomplishment with IMPI members!

IMPI TO CONDUCT CONSUMER SURVEY – Q1 2018

For the first time since 2013, IMPI will be conducting our **“Consumer Uses and Attitudes Regarding Microwave Ovens and Microwavable Products: Survey Report”** in the first quarter of 2018. This will be the 10th time the survey has been conducted since its inception in 1993. IMPI is looking to secure additional stakeholders (those who will sign on to help fund the research and data analysis and in return will have a role in the question creation). If you are interested in learning more about the Consumer Survey, please contact molly.poisant@impi.org

2018 WEBINAR TOPICS or PRESENTERS?

Do you have a topic you would like us to cover in 2018? Can you recommend a webinar instructor? We would appreciate any and all suggestions you have for our 2018 Webinar Series. Contact the IMPI office with your idea!

“The Changing Landscape of the Microwavable Food Market”

FALL SHORT COURSE 2017

CONAGRA BRANDS CAMPUS

OMAHA, NEBRASKA, USA

OCTOBER 2017



From Top Left to Right (by row) : Bob Schiffmann, teaching the Microwave 101 Pre-Short Course, Attendees enjoying the Welcome Reception at Brickway Brewery, Keynote Speaker Larry Levin of IRI Worldwide, USDA's Dr. Susan Hammons providing an update, Packaging Panel, Dr. Ric Gonzalez of Conagra Brands, Buffy Montgomery of Conagra, David Luttenberger of Mintel providing the Day 2 keynote and IMPI Staff.

THE JOURNAL OF MICROWAVE POWER & ELECTROMAGNETIC ENERGY (JMPEE)

It's been an exciting year for JMPEE. Checkout these stats we just received from our publisher!

- JMPEE has been accessed by 69 countries in 2017
- Abstract views are up by 166%, from 21,662 in 2016 to 57,541 in 2017
- Full article downloads are up by 428%, from 1,031 in 2016 to 5,444 in 2017

Volume 51, Issue 4 of the Journal of Microwave Power and Electromagnetic Energy is now available online. The Table of Contents for this Issue can be seen in the table below. **All IMPI members receive complimentary access to JMPEE. If you require assistance accessing your subscription please email: admin@impi.org**

Editor message: Sustainability and industrial microwave processing	Juan Aguilar
Self-matching plasma sources using 2.45 GHz solid state generators: Microwave design and operating performance	Louis Latrasse, Marilena Radoiu, Olivier Antonin, Thomas Nelis
Continuous tubular microwave heating of particulate foods at high temperatures	Birgitta Wäppling Raaholt, Lars Hamberg, Sven Isaksson
Anode shaping for rejection of n-mode in relativistic A6 magnetron	Hasan Zibaeenejad, Habibollah Abiri
3D Electromagnetic Modelling of New Loco-regional Hyperthermia Applicator Coupled with High Resolution Patient Specific Phantom	V. Moharramzadeha, R. Faghihia
Regioselective nitration of phenol under continuous microwave irradiation	Başak Temur Ergan, Mahmut Bayramoğlu, Elif Şahin

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