

THE WAVE



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Special IMPI 47 Edition



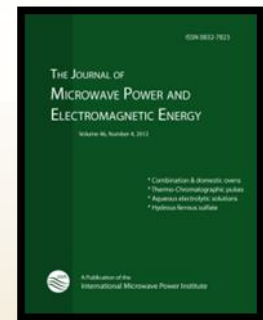
Letter from the President *by Bob Schiffmann*

If you repeat misinformation often enough, more and more people will believe it; and, if you make it easy to disseminate this misinformation, it will happen via blogs, YouTube, and other media. By following this media carefully, you'll see the same misstatements, hysteria, and propaganda repeated daily on the Web. The persons who do this are obviously not scientists, although some use titles such as "Dr". Others and I try to fight this through "comments" where we can, but frankly, it's a 24/7 job and I don't know any of us who has that kind of time. The IMPI Executive is looking for ways we can effectively spread accurate information about microwave heating and microwave ovens to the general public in order to combat all this misinformation.

While not public, IMPI's annual Symposia are devoted to disseminating facts in the form of the latest science and technology. This Newsletter is largely devoted to this year's Symposium: IMPI 47, to be held at the Hotel Biltmore in Providence Rhode Island from June 25-27. The Symposium's Technical Program Chairman Prof. Vadim Yakovlev, of Worcester Polytechnic, has put together an outstanding technical program with research contributions from all over the world, as well as a number of unique events including two simultaneous "Ask the Expert" panels, and a "Food Safety" panel. He and the Technical Program Committee have also invited contributions from several outstanding researchers and technical presenters from around the world.

(continued on page 2)

Call for Papers



JMPEE is currently accepting manuscripts for review. IMPI 47 authors are encouraged to submit their work for consideration. Please email your completed manuscript to meg.sheriff@impi.org. All references need to be clearly identified. In addition, all images and graphics need to be 1800 x 1800 dpi and sent in separate files. Images embedded in a Word document will not be accepted for publication. Copyright Release Forms are found on the IMPI website.

The Journal is published online quarterly under the leadership of Editor-In-chief, Dr. Juan Aguilar. The full volume (Issues 1-4) is available in print to members at the end of each calendar year for a reduced rate. IMPI members may access their complimentary copy of the Journal [HERE](#)

Ask the Expert: YOUR Questions, Answered.

Answer provided by: Bob Schiffman,

IMPI President

QUESTION:

I read on the Internet that water that has been boiled in a microwave oven and then cooled is harmful to plants. The blog wrote about a high school student doing a science fair project that compared watering a plant with purified water and another one with microwaved water and there were several photographs that showed the microwave-watered plant wilting badly after several days, while the other one was flourishing. Is this true?



ANSWER:

No, this is not true. It is an urban legend that has been around for quite a few years and keeps coming up again and again on the Internet. There is a very good explanation of this on the website Snopes.com and I urge you to read it. In essence it says that boiling water in a microwave oven is no different than boiling it on a gas or electric stove – there is no change in the structure of the water. They also make the point that “drawing scientific conclusions from experimentation involves conducting multiple trials under carefully controlled conditions, something not in evidence here.” The Snopes people that went on to run a number of tests with different plants and their results illustrate that there aren't no differences between the microwave heated water and tap water.

A final note of caution: the Internet is filled with erroneous information regarding microwave ovens and microwaving foods and other materials. It is important to carefully examine these claims and refute them when possible with hard scientific data.

Do you have a microwave-related question? Ask an expert by emailing your question to info@mpi.org.

Revision of

“Microwave Ovens: An Overview: 2013”

Dr. John Osepchuk, PhD

Full Spectrum Consulting

April 23, 2013

In February, 2013, I wrote the cited “Overview” largely based on tabulated data on the top ten exporters and top ten importers of microwave ovens in the world. The “source” of these data was the U. N. Comtrade database as interpreted by the publication, World Trade Daily. The tabulated data were in terms of financial value, only. Since then we were able to make our own review of the Comtrade data base and we found data on number of ovens shipped. These new data and our review alters the conclusions of the “Overview” dramatically. There are many more ovens manufactured than previously estimated and almost all manufactured in the Far East.

In the “Overview” we cited the financial data (for only 2009) from the World Trade Daily which showed that ~80% of microwave ovens were exported from the Far East (China, Malaysia and Thailand) with, surprisingly, 16% still exported from Europe. Japan and the U.S. represented negligible exports. It was assumed that exports implied “manufacture” and that commercial and industrial microwave ovens were not included in the data and even if they were they would be almost a negligible source of error. In the absence of actual number of shipments we used the import data for the U.S and the AHAM data on shipments for 2009 to compute an estimate of average “price” (wholesale plus shipping) and to estimate total numbers of ovens exported and imported. In this way we estimated that the total world production of ovens in 2009 was about 40 million and it appeared that roughly 1/5 were still being manufactured in the West—i.e. Europe. For the U.S. we know the total annual sales are greater than the AHAM number of 9 – 10 million because of imports outside of the AHAM membership. Because the FDA declined to provide us with their data on imports we didn't know the exact number of sales above the AHAM number. **Read the article in its entirety [here](#).**

Letter from the President *cont.*

One of the most enjoyable and fruitful parts of any IMPI Symposium is the opportunity to meet new people and network with them and colleagues. The Hotel Biltmore facilities are perfect for this with excellent meeting rooms AV facilities for the presentations, and great space for coffee breaks, discussions and social events. As usual we will have exhibits and an Interactive Forum with many posters. I encourage you to look at the IMPI website (IMPI.org) for more information and registration materials.

Also in line with my initial comments and IMPI's continuing advocacy of scientific and technical truth and excellence, I'd like to personally thank our Editor-in-Chief, Professor, Juan Aquilar-Garib, for his diligence in maintaining the highest standards that are required of a major scientific publication. I know this personally, having just published two papers in the Journal, and experiencing the scrutiny with which Juan examines each submission. By challenging every conclusion and checking every reference, he ensures that the edits express what the author of the paper intended.

Best wishes,

Bob





IMPI 47, June 25-27, The Providence Biltmore Hotel

This year's IMPI Symposium will be an exciting experience for all!

Technical Program Chairman Dr. Vadim Yakovlev has organized 15 exciting sessions as well as a number of distinguished Keynote and Invited Speakers that makes this a must attend event. Here are some of the highlights:

Technical presentations (in both oral and poster formats) will be made in several areas, including:

- Materials science
- Microwave assisted chemistry
- Computer modeling
- Microwave and RF processes, systems, and applications
- Microwave ovens, foods, packaging, and safety

These presentations will be made by a spectrum of speakers from 14 different countries.

The program will feature three special "Ask the Expert" panels which will address questions from the audience regarding the topic areas noted above.

Two keynote presentations will open the program. Dr. Elad Anter, BIDMC, Harvard Medical School, will talk about a newly developed fascinating technology of RF ablation of cardiac arrhythmias.

Dr. Juming Tang, Washington State University, will review challenges and opportunities in joint development of advanced technologies RF/microwave technologies by academia and industry.

A number of distinguished experts have been invited to make extended presentations at IMPI 47 including:

- Dr. Dinesh Agrawal, Pennsylvania State University
- Dr. Georgios Dimitrakis, University of Nottingham, U.K.
- Dr. Vyacheslav Komarov, Saratov State Technical University, Russia
- Dr. John Osepchuk, Full Spectrum Consulting
- Dr. Marilena Radoiu, SAIREM SAS

Two invited talks will be given by the representatives of the software companies developed the modeling tools widely popular and used in different areas of microwave power engineering. The extended lectures including live demonstrations of software functionality will be given by Dr. Walter Frei, COMSOL and Dr. Malgorzata Celuch, QWED, Poland.

Because of the many issues surrounding Not-Ready-to-Eat microwavable frozen products, special emphasis in the program is being placed upon food safety. These issues will be addressed in technical papers, a special panel session devoted to food safety, and the invited talk by Dr. Gerry Goldhaber, Goldhaber Research Associates, LLC, a renowned expert on communications, labeling and warnings.

Continued on next page

Providence: Be There!

We are thrilled to bring IMPI 47 to Providence, Rhode Island! Providence combines the accessibility and friendliness of a small town with the culture and sophistication of a big city. With a thriving arts community, vibrant and diverse neighborhoods, outstanding hotels, a renowned restaurant scene and so many things to do, Providence is the perfect place to visit. The city's compact size and convenient location make it easy to get to and hard to forget.

Consider spending some time on Benefit Street, where you can visit 5 attractions located within walking distance of one another: the John Brown House, Governor Stephen Hopkins House, Athenaeum Library, First Baptist Church of America and the RISD Museum of Art. Check out the [Online Visitors Guide](#) for even more great ideas about things to do in the Ocean State!

The scenic beauty and rich history of Rhode Island's other regions are a quick drive away. Historic and hip, sophisticated and small-town, Providence packs the best of New England into one convenient and colorful package!

Compliments of the Providence/Warwick Convention and Visitors Bureau

In addition, on Tuesday, June 25 IMPI presents two Short Courses:

- Product Testing and Labeling For Microwavable Products by Bob Schiffmann
- Design Considerations for Microwave Powered Systems by John E. Gerling

Other non-technical events are also planned. They include:

- Networking Welcome Reception
- A group dinner in the Italian district
- Numerous coffee breaks and networking luncheons

IMPI 47's Technical Program Chairman, Dr. Vadim Yakovlev, "invites all IMPI members to participate in this exciting technical program and to enjoy meeting your colleagues and friends in the excellent ambience of this Symposium."

To view a full Schedule of Events, details on registration and the hotel, and to register for IMPI 47 [click here](#). Early bird pricing is only available through May 15th so [register today](#). See you in Providence!

INTERACTIVE IMPI *Direct links to Microwave News on the Web*

Click [here](#) to learn about how fire in wheat bags caused one death in Australia.

Click [here](#) to read about "in-package electronics used to measure food freshness."

[Learn](#) more about RF ablation, where heat is delivered to particular tissue to regulate pain management.

While heat is thought always to move from hot top cold, researchers in Japan have shown it may flow in the opposite direction using "[spin waves](#)".

[Learn](#) about a new procedure for sterilizing food products - still in the research stage.

U.S. food-bourne disease rates [rose in 2012](#). Overall, there were a total of 19,531 illnesses, 4,563 hospitalizations and 68 deaths from nine germs commonly spread through foods in 2012.



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MEMBER NEWS

IMPI would like to extend a special congratulations to Bob Schiffman who earned his CFS (Certified Food Scientist). With this approval, Schiffman will be "etched in IFT's history as part of the inaugural class of CFS certificants," said Kurt Buckman the International Food Science Certification Chair. As a CFS, Schiffman will "undoubtedly help raise the visibility and recognition of the food science business," Buckman added.

INTERNATIONAL MICROWAVE POWER INSTITUTE

PO BOX 1140
MECHANICSVILLE,
VA 23111
USA

Ph: + 1 804-559-6667
Email: info@impi.org
www.impi.org