

# THE WAVE



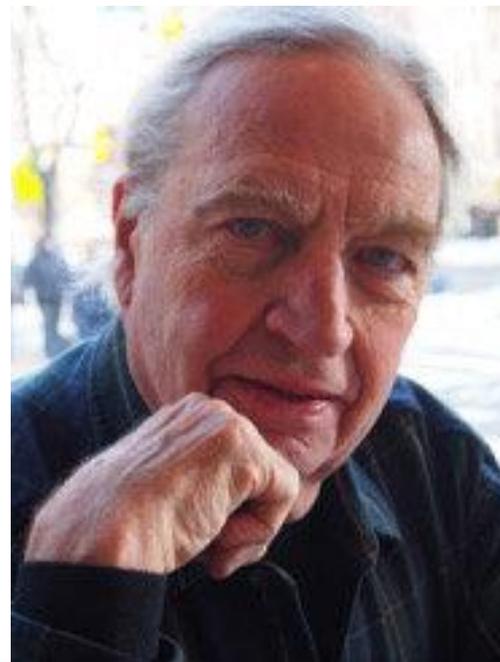
*The newsletter publication of the International Microwave Power Institute*

*December 2021*

*The New York Times*



The scientist Robert Schiffmann in an undated photo. He developed products (like microwaveable caramel popcorn) and processes that advanced microwave cooking. Evelyn Floret/The LIFE Picture Collection, via Shutterstock



## **IMPI Remembers Bob Schiffmann**

*by John F. Gerling, Interim President, IMPI*

IMPI, and indeed our entire community of microwave/RF technologists, [grieves for the sudden passing of Bob Schiffmann](#), earlier this Fall. He had been a huge influence on all of us from the very beginnings of IMPI in the mid-1960s. His leadership was instrumental in guiding IMPI to its present position of strength and importance, and so his shoes will be difficult to fill.

I am fortunate to have had Bob as a mentor and friend throughout my association with IMPI, including many years together on the IMPI Board of Governors and his select Executive Committee as Treasurer. On the advice, consent and good will of the Board, I am honored to have the opportunity to fill Bob's shoes and serve as Interim President until the end of the current term and next board election. With the invaluable assistance of Molly Poisant and Alicia Standridge in IMPI's executive office, I'm confident IMPI will continue to follow the course that Bob envisioned.

Shortly before Bob's passing, he asked the Board for advice and feedback on initiatives for IMPI's future and how to realize them. Questions include how to grow and broaden IMPI's membership profile, activities, and technical and scientific areas to pursue. Board members offered several good suggestions which, with their help, I'd like to put to action. No doubt our members have a few ideas they'd like to share as well. The goal is to not only increase the value and benefits of an IMPI membership but also strengthen IMPI's ability to deliver. I encourage all IMPI members to share their thoughts and ideas with me and other Board members. I'm looking forward to hearing them and working together to make them a reality.

Meanwhile, the [Call for Papers](#) is out for IMPI 56 in Savannah, GA. I'm looking forward to a full program of technical and scientific talks organized by TPC Chair Dr. Vadim Yakovlev and Vice-Chair Dr. Candice Ellison. I hope to see everyone there!

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*Cover Photos: Bob Schiffmann, as featured in New York Times in October 2021 (left) and headshot (right).*

## The 56<sup>th</sup> Annual Microwave Power Symposium (IMPI 56) Call for Papers, Registration, Hotel Rooms & Sponsorships

IMPI 56 will be held June 14-16, 2022 at the DeSoto Hotel in Savannah, Georgia, USA.

IMPI Members are encouraged to submit abstracts for the [56<sup>th</sup> Annual Microwave Power Symposium](#) (IMPI 56) prior to the January 14, 2022 deadline. The [Call for Papers](#) contains all relevant information for authors.



The Technical Program Committee for IMPI 56 is led by Dr. Vadim Yakovlev, of Worcester Polytechnic Institute, and Dr. Candice Ellison, NETL/Leidos. The Symposium will include keynote addresses, invited papers, oral and poster presentations, panel discussions, a student competition, an exhibit hall and various networking opportunities over the three-day event. The full program will be released on March 1, 2022; in the interim, you can follow speaker announcements on [our events page](#) and via our social media platforms.

[Registration will open](#) the week of December 6<sup>th</sup>, and early bird pricing will be available until March 14, 2022:

Corporate/Professional Members: \$650 and Student Members: \$425. Pricing will increase by \$100 in mid-March. The registration fee includes a Welcome Reception on June 14<sup>th</sup>, all sessions, continental breakfasts, coffee breaks and lunches on June 15<sup>th</sup> and 16<sup>th</sup> as well as a digital copy of the conference Proceedings. Registrants will also have the option to add-on a Modeling Workshop and a Group Dinner. The Spouse/Guest program details will be added to the website by early next year.

[Hotel rooms at the DeSoto Hotel are available](#) for a special rate of \$159 per night (plus tax) on a first-come/first-served basis. In-room internet is included in the rate.

IMPI is delighted to have **Muegge GmbH** as our IMPI 56 Platinum Sponsor, **Microwave Technologies & CrescendRF** as Silver Sponsors, **Odyssey Technical Solutions** as a Group Dinner Sponsor and **Leanfa srl** as a VIP Reception Sponsor. If your company is interested in Sponsoring or Exhibiting at IMPI 56, please contact [molly.poisant@impi.org](mailto:molly.poisant@impi.org) at your earliest convenience to secure your spot!

## Bob Schiffmann Remembrance

Dear IMPI Members,

I just wanted to take a moment to thank you for the outpouring of support over the past three months. I had the pleasure of working alongside Bob for eleven years; he was a leader and a teacher, but most of all, he was a wonderful mentor and friend. It has been a difficult time for all of us who cared for Bob, but I have no doubt that he would want us to continue IMPI's important work: this is his legacy.

Thank you to each of you who contributed to, or took part in, the virtual memorial service IMPI held in Bob's honor in mid-October. If you missed it, and would like to watch it, please send me an email and I am happy to share a recording. Thank you to everyone who sent a note for his family; we have passed them along and they are so grateful to hear about how Bob impacted your lives. Also, if you have not yet [read the tribute to Bob](#) in his favorite newspaper, *The New York Times*, it is a beautiful piece. Plans are underway to unveil both an award and memorial scholarship bearing his name at the IMPI 56 Symposium in June. If you would like to volunteer to help with either of these, please send me an email.

Finally, I would be remiss if I didn't apologize for the lateness of this *Wave* newsletter. Truth be told, this was one of the things that Bob and I always worked very closely on, and it's been difficult to work on this first one without him here. Moving forward, we will resume with the newsletter every other month. Thank you again for everything.

Sincerely,

Molly Poisant, Executive Director, IMPI

## IMPI Went Virtual In 2021...



Congratulations to Ran Yang, University of Tennessee, who was our IMPI 55 Symposium Student Competition Winner! We would also like to congratulate John H. Forster, University of Toronto, who received Honorable Mention in our Student Competition! [July 1, 2021]



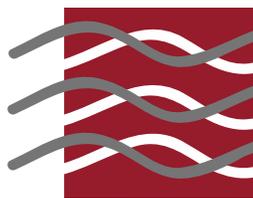
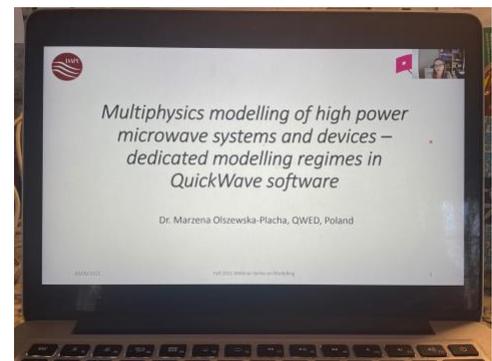
IMPI, like most associations worldwide, had to rely solely on virtual events in 2021. A Virtual IMPI 55 Symposium, a Virtual Fall Seminar as well as five Webinars helped to keep us connected throughout 2021. Thank you to our organizers, speakers, and participants. We can't wait to see you in-person again soon!

**IMPI Fall Seminar 2021**  
Tuesday, October 19, 2021  
10:00am-1:30pm EDT



INTERNATIONAL  
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INSTITUTE

 <b>Darren Seifer</b> Food & Bev Industry Analyst NPD Group Consumer Trends & Behavior	 <b>Lisa M. Keele</b> Editor in Chief Meetingplace All-Meat	 <b>Matt Krieger</b> President Cober, Inc. Industrial Microwave Heating, Food Processing & the Industrial Internet of Things	 <b>Klaus Werner</b> President pinkRF & IMPI SSRFE Section Solid State RF Energy – Tech News & Use
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## IMPI SOLID STATE RF ENERGY SECTION

### Solid State RF Energy Section Annual Business Meeting

The Section conducted their annual Business Meeting on October 18, 2021 during which time they elected their leadership for the year ahead. Dr. Klaus Werner, of pinkRF, was re-elected Chairman, Mr. John Mastela, of EliteRF, and Mr. Sanghun Lee, of WavePIA, were re-elected Vice Chairmen, and John F. Gerling, of Gerling Consulting, will serve at the Treasurer. The position of Secretary is currently vacant.

### Microwave Markup Language Beta Release

The RF Tagging Initiative unveiled the first stage development at IMPI's June 28, 2021 annual symposium, newly named in beta release Microwave Markup Language ("MML"). MML anticipates the widespread adoption of solid-state microwave ovens, and their ability to cook and heat with heretofore unknown precision and accuracy. To that end, open source and open ended MML use a hypertext structure within which every conceivable microwave heating quality of a food product can be encoded. MML was created over the last year by a team of IMPI volunteers from industry, academia and the scientific community. MML rollout will continue in early 2022.

**Membership:** is open to all IMPI members; there is no additional fee to join. Those interested in more details should contact [alicia.standridge@impi.org](mailto:alicia.standridge@impi.org)

## **JMPEE Impact Factor Rises Again, Volume 55, Issues 3 & 4**

Under the leadership of Editor-in-Chief, Dr. Juan Aguilar, IMPI's peer-reviewed scientific journal, *The Journal of Microwave Power and Electromagnetic Energy* had another great year with the Impact Factor rising to 1.325!

A list of the articles appearing in JMPEE 55.3 and 55.4 can be found below. As a reminder, online access to JMPEE is included in your IMPI membership dues. If you need assistance accessing JMPEE, please contact [alicia.standridge@impi.org](mailto:alicia.standridge@impi.org)

### **Volume 55, Issue 3 (Released in September)**

**Editor's message: Cooling evolution for validating microwave heating models.**

Juan Aguilar

**Effect of intermittent microwave vacuum concentration on quality parameters of apple juice and sour cherry nectar and mathematical modeling of concentration.** Cüneyt Dinçer

**A theoretical analysis of the relationships shown from the general experimental results of scattering parameters  $s_{11}$  and  $s_{21}$  -- Exemplified by the film of BaFe<sub>12</sub>-iCe<sub>10</sub>O<sub>19</sub>/polypyrrene with  $i = 0.2, 0.4, 0.6$  .**

Ying Liu, Michael G. B. Drew, Hexing Li, and Yue Liu

**Drying kinetics and quality characteristics of microwave-assisted hot air dried beef chips.**

Elif Aykın-Dinçer, Büşra Atlı, Özge Çakmak, Seda Canavar, and Ayşegül Çalışkan

**Extraction of nano-metals with judicious combination of microwave heating and acid leaching process from E-waste.** Satya Sai Srikant, Rajendra Prasad Mahapatra, and Raghupatruni Bhima

**Microwave upgradation of Yunnan Lignite: Dielectric Properties, Drying Pattern and Kinetics.**

Lei Guo, Pengfei Zhao, Chenhui Liu, C. Srinivasakannan, Jinhui Peng, and Jiyun Ga

### **Volume 55, Issue 4 (Will be Released this month)**

**Editor's message: Farewell to our friend Bob Schiffmann.**

Juan Aguilar

**Measurement and modelling of dielectric properties of different animal feed resources as a function of feed type and moisture content.** Md Safiqur Rahaman Shishir, Mohan Jacob, Kenneth Leong, Long Cheng, Brendan Cullen, and Graham Brodie

**Machine Learning Approach to Transform Scattering Parameters to Complex Permittivities.**

Robert Tempke, Liam Thomas, Christina Wildfire, Dushyant Shekhawat, and Terence Musho

**Prenatal chronic exposure to electromagnetic fields modulated adenosine deaminase activity in serum and brain of Wistar rats' offspring.** Behrooz Mohammadi, Mahdi Sadegh, and Homa Soleimani

**Study of the high heating efficiency and uniformity by multi-port sweep frequency microwave irradiations.**

Wu Yuanyuan, Lan Junqing, Yang Fengming, Hong Tao, Yang Yang, Zhu Huacheng, and Tang Zhengming

## CALENDAR OF EVENTS

Stay up to date with IMPI Events by visiting our [Calendar of Events page](#). If you have an event you would like to add to the Calendar, please contact [molly.poisant@impi.org](mailto:molly.poisant@impi.org)

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