



EDITOR'S MESSAGE

Microwaves & Chemistry



In concurrence with the centennial of the Nobel Prize in Chemistry awarded by Marie Curie in 1911, this year has been declared, by the United Nations Educational Scientific & Cultural Organization (UNESCO), as the International Year of Chemistry (IYC 2011). Thereby, celebrating chemistry's achievements and contribution to mankind.

The official Opening Ceremony of the IYC 2011 took place last January in Paris, France, at the headquarters of UNESCO, and was attended by delegates from 60 countries. Many related events are being organized by chemical societies worldwide.

All of the persons honored with this prize, made their contributions through hard work, both in labor and thought, rather than by the events described in popular tales, often in movie dramatizations, such as the idea that Newton suddenly thought in the Universal Law of Gravitation right after an apple fell on his head, while sitting under an apple tree. The tale tends to give more attention to a romantic scene in nature, than to the most important fact; Newton was conceiving of the nature of acceleration.

As in the case of Newton, there is also a tale regarding the "accidental invention" of the microwave oven by Percy LeBaron Spencer while he was working with a magnetron and a candy bar that he had in his pocket was melted. This led to experiments that showing that temperature of many foods rise rapidly when exposed to microwaves, leading to the microwave oven invention itself. However, anyone involved in microwave engineering will realize that designing a working microwave oven for a given application with this very basic information is rather improbable; instead, a team of engineers worked diligently to develop the product.

Microwave and chemistry are strongly related as the science of applying microwave energy to chemical reactions. Knowing that accidental observations or discoveries, maybe possible, and that there is no such thing as an "accidental invention"; Microwave Chemistry goes far beyond the black box, where a number of substances are placed in an oven, without any thought, just to see what happens.

Microwave Chemistry has gained great acceptance as other effects are being attributed to microwaves. Some of them invoke controversial phenomena supported by unusual observations that suggest that there are reaction mechanisms that do not require the transfer of microwave energy into thermal energy.

Any process involves energy exchange, and given the fascinating and controversial results reported in Microwave Chemistry, this area of science is extraordinarily interesting for research in academia and industry. These phenomena, as well as new applications, will be developed only through theoretical and experimental work.

Advances in the field are possible because many results, analysis and discussions are available through publications, conferences, congresses, symposia, fairs and exhibitions. These activities are being promoted during IYC 2011 in the field of chemistry, as IMPI has been promoting the exchange of ideas and experiences in microwaves, for every purpose, for 45 years.

The IYC 2011 Closing Event will take place in Brussels, Belgium by the end of the year; International Years are made for commemorating important events, but they also provide a sort of unifying inspiration. During this time IMPI is looking forward to have the same unifying effect for all the societies related to microwave processing and applications. Currently, it is expected that JMPEE will include material, in the form of journal papers, from the Symposium "Microwave in Sciences and Engineering Applications" as part of the International Conference on Materials for Advanced Technologies (ICMAT 2011); the Symposium "Microwave & Radio Frequency Materials Processing" within the 9th International Meeting of Pacific Rim Ceramic Societies; and the 13th International Conference on Microwave and RF Heating of AMPERE.

We are looking forward to receive your contributions, and are working to offer all of you a respectable publication where your achievements are recognized, shared and preserved.

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