EDITORIAL

Drying has been a particularly important and active area of research in the agricultural and food sectors all over the world. Indeed, a majority of papers published in Drying Technology have a direct or indirect relevance to drying in these sectors, which are also perhaps the most important economic sectors for most countries of the world. They will necessarily remain so over the current century as well. Past century saw remarkable contributions by engineers and scientists to mechanization leading to lowering of animal and human labor requirements in agriculture, to enhancement of productivity of foods in a variety of environmental conditions and effective use of chemicals to stimulate growth in food production to feed the rising population of the globe.

As noted by Professor Vincent. F. Bralts of Purdue University (IACS2002, Shanghai, China, November 2002), there is need to open up new opportunities in the current century through the application of science and engineering in the arena of what he calls ***Extreme Engineering (EE*).** This arena encompasses subjects that have attracted extreme attention of researchers and media alike, e.g., nanotechnology, proteomics, GMOs, etc. Developments in information technology and telecommunications will have their impact on agriculture and food supply for the world's population. Developments in biosensors, biomaterials, bio-processing and their applications to agriculture as well as other industrial sectors will make dramatic changes to the quality of life on earth providing the geopolitical situation permits it. Clearly, science, engineering and technology are poised to take huge leaps ahead and thus make massive positive impact on the current quality and standard of living. However, it is just as critical to develop the right kind of global environment which will permit application of the EE-based discoveries to benefit humanity as a whole.

Drying is an energy-intensive process. Therefore, the need to develop more efficient drying processes will remain important along with the use of renewable resources that will reduce dependence on the limited fossil fuel reserves. Extreme engineering will generate new, as-yet unknown opportunities for those of us interested in drying R&D. We need to expand our horizons and look beyond the current needs to identify novel and challenging opportunities. Future researchers in the inter-disciplinary field of drying will need to collaborate more actively than heretofore required to make truly impactful contributions that will have a lasting value to fundamental science as well as commercial application. In fact, they will need to have a more diversified portfolio of knowledge in sciences (e.g. physics, chemistry, biology, etc.) as well as engineering (including information systems, computer applications, etc). Curricular changes taking place in many parts of the world will provide the necessary background for the future generation of researchers in drying to be armed with a bigger arsenal of knowledge tools to tackle more challenging problems they need to face in coming years.

Arun S. Mujumdar
Editor-in-Chief
Singapore