

Speech of Prof. Dr. Dragan Uskokovic, President
of Yugoslav Materials Research Society and Director
of the Institute of Technical Sciences of SASA at the Eighth
Conference of Yugoslav Materials Research Society
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Honourable ladies and gentlemen, dear colleagues,

I have a great honour and pleasure to greet you in the name of the Yugoslav Materials Research Society and the Institute of Technical Sciences of the Serbian Academy of Sciences and Arts, at the beginning of the Eighth YUCOMAT Conference and to wish that the program in front of you be the source of new information and useful discussions. Previous seven conferences, held since 1995, and their Proceedings published by Trans Tech Publications from Switzerland in their Materials Science Forum Edition, are visible proof of the path we have come through. On this occasion I wish to distinguish a significant contribution to achieving Proceedings' publishing continuity by our recently departed colleague and friend Dr. Giovanni Battiston, who helped us through the most difficult times. Please, let us have a minute of silence to pay our respect to our dear Vanni. ... Rest in peace.



Avanti sempre !!!

YUCOMAT Conferences played a significant role in the development of materials science in our country. During the last 10 years, it has transformed from national to international conference. We realized important contacts on international level and attracted many of our renowned colleagues working in foreign laboratories. Themes and topics of the papers present at many meetings of various Materials Research Societies worldwide are also present at our conferences. This year's conference, too, is not an exception and I believe it has succeeded in general to retain the upward line of development which we set when we decided to change from every two years to annual conference organization. As you may see from this year's Conference Programme, three Plenary Sessions and five one-day Symposia are planned to be held, dedicated to advanced methods in materials synthesis and processing, advanced materials for high-technology application, nanostructured materials, composites and biomaterials. Several hundred scientists from our country and the world submitted 214 papers. 17 invited lectures will be presented within three Plenary Sessions, 62 papers will be presented orally and 135 as posters. The authors of 62 papers are from foreign laboratories, 36 papers are products of joint research teams with our authors and their foreign colleagues, while the rest 116 paper are from our country. Authors from 32 countries from all continents are represented. Proceedings of this, as for the previous seven conferences, will be published by *Trans Tech Publication Ltd*, Zürich, Switzerland, in its Materials Science Forum Edition in English, thus adequately presenting our scientists and the whole manifestation to the world. This journal's impact factor for the last few years was between 0.4-1.0, at the middle of the listing in this field.

The topic that dominates this Conference and is part of many invited lectures and practically all symposia is nanomaterials and nanotechnologies. More than 50% of all papers that will be presented at the Conference contain prefix “nano” or implicitly include consideration of properties and processes on nano level. The trend of “nano” challenges that has conquered the world is gaining momentum here, too. After more than 20 years of fundamental and applied research, controllable production of nanomaterials has succeeded in becoming a big business. Nanomaterials are now used in electronics, cosmetics, automobile industry and medicine. There is more than 200 nano-products currently on the market, with a wide spectrum of application from sports ware to computer processors. A detailed study that Friends of the Earth recently published showed that 60% of these products were used in cosmetics and skin protection. Since such substances can have substantially different characteristics as compared to their bulk counterparts, there is more and more calls for caution considering their application. Identical chemical composition may not be enough to signal green-light for some nanoproducts use; detailed toxicological and other tests are necessary, especially for application in medicine and environmental issues.

Development in nanotechnologies aspires to limit itself to the interests of only industrially developed countries. But application in automobile industry, for tennis racquets, skis wax and anti-sun-burn creams, does not represent the essential interest for more than 5 billion people in developing countries. Therefore, further development in this field should be balanced so that ongoing primary focus of industrial countries shifts to better attention of the needs of developing countries, having in mind the great number of that population and the benefits those solutions would bring. This is mostly related to finding solutions for some of the globally most critical development problems in the field of water, energy, health and environment, agriculture and management of biodiversities and ecosystems. These five fields, known as WEHAB, were identified as critical for undeveloped countries on the United Nations Summit on Sustainable Development, in 2002 in Johannesburg. Developing countries on their part have to give their contribution to these efforts by raising general level of knowledge and culture of their population, as well as reaching nanotechnological solutions for adequate application in their countries and worldwide.

As “nano” becomes a symbol of the next industrial revolution, there are many examples where “small” becomes “big”. Nice example of the significance of various new materials and advanced processes comes from a group of people working in the field of powder metallurgy, and that on iron and diamond powders. Global consumption of iron powder is 100 million times bigger than that of diamond powder. At the same time, their relative market values are only 10 times different. That example points on the huge possibilities available to researchers working in our field, so that their results find their place on the global market of knowledge and technologies. When one follows the path of excellence and accomplishes extraordinary results, achieving world heights is not out of reach.

With such a shining perspective in the field of new materials and processes, I wish you once again a successful work during the Conference and pleasant stay in this beautiful city of flowers, art and warmth.