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## Editorial

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Saudi Arabia is catching up very rapidly with the rest of the world in nanotechnology. Therefore, the scientific community in the Kingdom is very interested, like the rest of the international scientific community, in the very promising potential of nanoparticles. Nanoparticles are looked at as a bridge between bulk materials and molecular structures. Nanoparticles exhibit novel properties such as quantum confinement, superparamagnetism of magnetic materials and surface plasmon resonance in some metals. Such phenomenon is manifested as the size of nanoparticles approaches 100 Nm size and below where the ratio of surface atoms or molecules to the total number of the atoms or molecules of the whole volume of the material become rather significant. Nanoparticles are already used in commercially available nanotechnology products such as sun screen lotions and self-cleaning surfaces. Nanoparticles also have proven to be very useful in nanomedicine applications, especially in diagnosis, bio-sensors, imaging, scaffolding bone material and targeted drug delivery. Among many other applications, nanoparticles can be the basis for photovoltaic solar cells for future renewable energy of Saudi Arabia and the rest of the world.

Saudi Arabia launched its own nanotechnology national initiative and has taken many daring leaps in providing researchers in the country with state-of-the-art first and second generations nanotechnology infrastructure. Such relatively regional advanced nanotechnology status was reflected on the themes of the International Conference on Nanotechnology: Opportunities and Challenges (ICON008) organised by the Center of Nanotechnology, King Abdul Aziz University, Jeddah, Saudi Arabia. The conference highlighted the capability of many countries in the Arab region to fabricate nanoparticles and nanostructures for a diverse range of exciting and important applications, as well as providing an international platform for interaction and long-term collaboration with international expertise attending the conference. Such insight was guided by our vision for sustainable development of global societies. The conference organisers are indebted for the *International Journal of Nanoparticles* for devoting this special issue to the accepted papers submitted to the conference on nanoparticles. They also extend thanks and gratitude for all the invaluable scientific contributions of all the authors, referees and editorial board of the journal for the rigorous efforts towards this special issue.