

*EDITORIAL*

## Science embraces all, enriches all

Science is the pursuit of knowledge with an established process of enquiry, logic and validation; and it stands on the tripod of three subjects - Mathematics, Physics, and Chemistry. With the progress of civilisation, science branched out broadly into the areas of engineering and technology to include all domains of practical knowledge to fulfil the need of the society. Realising the importance of science as culture for human survival, United Nations General Assembly often adopts the policy to focus a particular year as special year to dedicate on a specific subject of Science for celebration with a purpose to observe and examine the issues of international interest and create awareness among the people around the globe. With this initiative of UN, at the outset of the new millennium year 2000 was observed as 'International Year of Mathematics'. Subsequently year 2005 was declared as the 'International Year of Physics' in recognition of the centenary year of the 'Miracle Year', in which science legend Albert Einstein published his landmark papers to impact the field of science in general and physics in particular to propagate the concept of Brownian motion, photoelectric effect, relativity theory.

Likewise year 2009 was celebrated as the 'International Year of Science' to commemorate the achievements of two stalwarts of science personality – one is Galileo and other is Darwin who made the landmark discoveries for human civilization – one in the area of astronomy and the other in the area of understanding the evolution of species, both of which are equally and extremely eventful. This is very important because astronomy is a subject of science to study the natural laws of movements of heavenly celestial bodies; on the other end the subject of studies of evolution of species is so original at its miniscule level that it is really awesome. In fact, the anniversaries of these two important discoveries of diverse dimensions speak volumes of the significance of year 2009. Year 2009 was also important because one more eminent personality none other than Abraham Lincoln who has left indelible marks in the society by his signal contributions and whose 200<sup>th</sup> birth anniversary was also celebrated in the same year. Year 2009 will be remembered as very special year where three unique minds Galileo, Darwin and Lincoln - the hallmarks of natural and social sciences will always inspire the generations of human society to develop the culture of amalgamation of natural science with social science for a scientific society and humanity at large.

With the same spirit and enthusiasm, year 2011 was celebrated as 'International Year of Chemistry' to highlight and remember the major events and milestones of achievements of

chemistry to appreciate and reciprocate its role in our day to day life. Chemistry is unravelling the mysteries of events of life happening around at different points of time; and it is the chemistry that controls every event of life directly or indirectly which is why American Chemical Society proclaims: Chemistry for life! Chemistry is continuously contributing to help carry forward human endeavour for disease free healthy life.

Quality of life inherently always has a tendency to improve, thus it makes the exploration for better technology through nurture of ever dynamic scientific research to meet the challenges of improved quality of life. In order to meet the demands of modern lifestyle, there is tremendous pressure on our planet from disaster. Earth has ample resources and energy but that is not endless which calls for sensible approach for sustainable technology to protect our planet. Sustainable energy is the driving force for fulfilment of the needs of the present society without compromising the requirements for the future civilization. Thus, in the current year 2012, the call came from the UN as 'Sustainable Energy for All (SE4ALL)' in global scale. In fact, the initiative is led by the Secretary-General of the United Nations, Ban Ki-moon to achieve universal energy access, improve energy efficiency, and increase the use of renewable energy.

In India, on the other hand, 2012 has been declared as the 'National Mathematical Year' to commemorate the 125<sup>th</sup> year of birth anniversary of the mathematics wizard Srinivasa Ramanujan, one of India's greatest mathematical geniuses who made extraordinary contributions to the mathematical analysis. More interestingly, it is as if to extend the observance of Indian National Mathematical Year, the UN has declared 2013 as the 'International Year of Mathematics of the Planet Earth' to emphasize on the fact that mathematics plays key role in understanding the complex processes which constantly affect the planet earth as a result of the human activities. And the issues like climate change, sustainability, man-made disasters, control of diseases and epidemics, management of resources, and global integration have come to the fore.

Thus clearly since the last decade or so, the role of science is re-emphasized in a more active manner than ever before by the United Nations which reminds the researchers to cultivate science. This is because traditionally the roles of science have been to discover and disseminate knowledge besides educating the next generation of researchers. In the developmental process, scientists are in constant search for the truth to know how nature works and understand the natural laws to develop

theories and evolve experimental techniques to establish the process of production for the human cause.

The culture of sharing of knowledge in global scale can enable the researchers to integrate themselves and augment science further for the betterment of our planet. As such science does not have any geographical boundary nor has any restriction to remain stagnant in a particular domain or discipline but it is a dynamic process, providing logical thinking towards unfolding the truth for the human civilisation and its chromatic culture. Nobody can deny that such culture needs to be defended. In the real world, defence can provide protection and defend the dignity of human civilisation and its colourful diverse culture where science plays supreme role by embracing all researchers and scientific workforce without discriminating any domain or profession. The word 'defence' carries a much broader meaning often misunderstood by many of the researchers for a similar word military which is more specific and actually applicable for different cause and culture. But the culture of publication of results of different areas of

research brings the minds of diverse disciplines to a common platform to play the symphony of harmony to help defend the concept of unity in diversity.

Thus obviously *Defence Science Journal* (DSJ) shares the responsibility with a broader vision and carries a much bigger canvas of publications towards integrating the whole research community of the globe. Since 1949, *Defence Science Journal*, also popularly known as DSJ, has been providing yeoman service to the entire scientific fraternity by extending its platform for publication of articles received from all echelons of scientists, technologists, and engineers without showing any proclivity towards a particular professional or research community provided their original ideas and research results imbue the minds of the readers for the larger cause of scientific culture where publications play significant role.

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