Scientific (con)fuson!

Recent historic event of total solar eclipse, on 24 October 1995, witnessed an unprecedented response from public, especially in the areas like Neem Ka Thana, Iwaragunj, Bhind and Diamond Harbour where the population is still far from the so-called metro-elite.

What was disappointing during the whole saga was varied versions of scientists and others made public through popular media on 'how to look at the eclipse'? I glanced through many newspaper advertisements cautioning the public not to look at it under any circumstance. To quote one such example—Directorate General of Health Services (Ophthalmology section) at New Delhi, categorically warned, 'Do not look at it, directly or through any filters or dark glasses not even its reflection in water'. (Hindustan Times, 23 October 1995). A similar decree was promulgated in Hindi and English through the DD national hookup by the Department of Health cautioning public not to see the eclipse at all. On the contrary, scientists kept on saying that looking at the eclipse through the specially designed filters (reducing radiations up to 1 lakh times) was safe. Kits to this effect were also distributed by Vigyan Prasar, c/o Department of Science & Technology, New Delhi. Some scientists in their interviews, while condemning the superstition associated with it, went on saying that eclipse can be seen with naked eyes with some exceptions (?). One national daily reported that public in the Indian science city (Bangalore) stayed indoors till the event was over.

This was the first public exposure of scientific community through popular media and such discrepancies coupled with fault/unprofessional live telecast (flooded with ads, wrong camera positioning, etc.) of the event marked the poor scientific communication in our country.

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Physical chemistry teaching

There are very few students who are studying physical chemistry in India, particularly in western India. I would like to stress that in almost all universities in western India, there is probably no student in physical chemistry who has opted for the subject willingly. Only 3-4% of chemistry students are studying physical chemistry in Gujarat. The same unfortunate situation prevails in Rajasthan. In MP also the number of physical chemistry students is not more than 6%. The situation in Maharashtra is also no exception. In the rest of the country the situation seems to be similar as evolves after a series of discussions with various teachers. There seems to be an idea floating around which indicates that physical chemistry is theoretical chemistry and hence has no relevance to Industry. This seems to be the opinion of employers, students and also of some chemistry teachers. Hence I would like to request them to think the matter over and for the sake of chemical education and industry in India, to begin working in changing this unfortunate perception.

Physical chemistry is probably the grammar of chemistry. Thermodynamics which deals with the heat change in any chemical reaction is certainly the backbone of any industrial process. Catalysis, irreversible thermodynamics, polymer properties, interface chemistry, detergency, electrochemistry are all parts of physical chemistry and are part and parcel of our industrial life. These are taught up to the postgraduate level in any university of India. A large amount of research in this country is done on these topics. Hence I believe that without good physical chemists around, the teaching and research in chemistry will suffer which will have a cascading effect on the chemical industry in India. Spectroscopy, the backbone of today's chemical sciences, is also a part of physical chemistry and is taught in detail. My personal opinion is that a good physical chemist is versatile and can handle many different types of job. I hope the academicians and employers will think of this matter with the seriousness that it deserves and the reversal of an unfortunate trend will occur.

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