

Is The Simplest Chemical Reaction Really So Simple?

Prof. Richard N. Zare, Stanford University

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Homi Bhabha Auditorium, TIFR, Homi Bhabha Road, Colaba, Mumbai 400005

The reaction in which a hydrogen atom collides with a hydrogen molecule to form a new hydrogen molecule and a hydrogen atom is often referred to as the simplest neutral bimolecular reaction because this collision system contains only three electrons and three protons. Modern computational methods have become so powerful for predicting the outcome for bimolecular exchange reactions that it might seem further experiments are not needed. Nevertheless, experiments have led the way to cause theorists to look more deeply into this simplest of all chemical reactions. The findings are not so simple.



Richard N. Zare is the Marguerite Blake Wilbur Professor in Natural Science at Stanford University. He received his B.A. degree in chemistry and physics in 1961 and his Ph.D. in chemical physics in 1964. He has been associated with Massachusetts Institute of Technology, and Columbia University in the past. In 1977 he moved to Stanford University, and was named Chair of the Department of Chemistry at Stanford University in 2005. In 2006 he was named a Howard Hughes Medical Institute (HHMI) Professor.

Professor Zare is renowned for his research in the area of laser chemistry. His development of laser induced fluorescence as a method for studying reaction dynamics has been widely adopted in other laboratories.

Richard Zare has for many years been a friend of India. He is presently a foreign member of the Chemical Research Society of India (CRSI) (2007), the Indian Academy of Sciences (2008) and a Fellow of TWAS, the Academy of Sciences for the Developing World (2009). Previously, he has presented the Rajiv Gandhi Science and Technology Lecture, Bangalore (2009) and just recently the Centenary Lecture, IISc (2014) and the C. V. Raman Memorial Lecture, Kolkata (2014).

Lecture open to all

For details: pro@tifr.res.in. Phone: 22782500, 22782669, 22782235,