

TRANSLATION

Acceptance Speech

**Prof. Richard Zare**

Co-Winner of the 2011

King Faisal International Prize for Science

33rd Awards Ceremony

Sunday 13 March 2011 (8.4.1432H)

HRH Prince Nayef Ibn Abd Al-Aziz Al-Saud

Second Deputy Premier and

Minister of Interior

Your Highnesses

Your Excellencies

Distinguished Guests

I feel deeply honored to share with Professor George M. Whitesides the King Faisal International Prize in Science. This award is especially meaningful to me for it recognizes contributions to understanding nature in a way that has led many others to deepen their own explorations. From how basic bond-making and bond-breaking transformations occur in molecules to the detection and quantitative measurement of small amounts of chemicals in tiny environments, I have sought to find and understand the fascinating mysteries of nature. My struggles and devotion have, indeed, filled decades of my daily life. In many ways such endeavors are lonely. The satisfaction of obtaining insight into how nature behaves may, at first, seem like a private pursuit - but, in reality, much of the, pleasure for me lies not only in discovering ways to picture the processes of nature but also in sharing those pictures with others.

In this way, I believe that science and art have much in common. There is a joy of creation, of giving shape to what initially seems formless and without purpose or obscure and abstruse. The joys of science are not simply

in the process of discovery but also in communicating insights to others. I think that artistic expression may be similarly rewarding. What playwrights would compose plays if there were no friends or audiences to hear them? What few visual artists do not appreciate fellow artists and viewers who behold their works and find meaning in them? In a like manner it is the telling of a story, as well as its conception, that provides pleasure for so many. The practice of science is driven in part by curiosity but also, for me, in sharing the experience with others.

Creation, whether artistic or scientific, is thus both a solitary and a communal undertaking. In isolation, an artist may experience the simple joy of creativity. And just as the work of an artist may find fresh interpretations in the eyes of a perceptive observer - views not contemplated by the original creator - so the scientific illumination of a fundamental tenet of nature often finds an unanticipated extension in the conceptions of other scientists, thereby opening windows on fresh vistas.

And on occasions such as this, it is important to recognize that scientists serve not as isolated actors; rather, we draw upon many others who make our work possible, the teachers we have had, the families and friends that support us, our students and colleagues, our coworkers, and even other scientists whom we have never met who contribute to the enterprise. Furthermore, one must recognize the charitable and governmental institutions that have supported scientific research when the returns to society often seem distant and remote.

There are so many who have backed my endeavors: I remember especially those who worked to nominate and support me and the members of the jury who gave their time and selected me for this most special and gratifying honor. Let me express my sincere thanks.

In closing, I would like to speak briefly about the international nature of the scientific enterprise. Many regard the practice of science as intensely competitive and imagine what is called a zero-sum game in which for every winner there are many losers. I think this view is false, and even destructive. Let me explain why. If you feed a hungry person some food you have, then

of course you have less food. In sharp contrast, if you teach a person some new knowledge, both you and the person gain. In the teaching and discussing with others, you sharpen your own thoughts and together you both will do more. Science is an international activity in which everyone wins from new discoveries, not each to the same extent, but it certainly leads to a better world.

I am all the more grateful to the King Faisal Foundation which is dedicated to serving Islamic civilization, supporting continuing research, and encouraging cultural and scientific activities in a number of different fields. Their efforts to support science indicate a depth of insight and concern and awareness that humanity must work for both the present and the future, while maintaining a firm awareness of the past. This commitment speaks to the importance they see in individuals who treasure the knowledge of how fundamental processes take place in nature. May it inspire others to follow in this noble pursuit!

Thank you again.