

Laureation given by Prof. Lesley Yellowlees, Dean of the College of Science and Engineering, at the Graduation Ceremony on 28th June 2016

Mr Vice Chancellor, in the name and by the authority of the Senatus Academicus I have the honour to present for the degree of Doctor of Science:

Professor RICHARD NEIL ZARE

This year marks the 50th Anniversary of the first award of a degree in Chemical Physics from the University of Edinburgh and so it is fitting that we recognise this occasion by awarding an Honorary Degree to one of the most influential Chemical Physicists of the past 50 years – that is Professor Dick Zare. Dick is renowned for his seminal research in laser chemistry, his outstanding contributions to education, his policy work at the very highest of government levels and his long standing and highly visible support to women in science. Dick's achievements are extraordinary and are mirrored by his prizes which include the US National Medal of Science, the Welch Award in Chemistry, the Faraday Lectureship of the Royal Society of Chemistry, the Wolf Prize in Chemistry, the King Faisal International Prize in Science and the Priestley Medal from the American Chemical Society.

Dick's love of Chemistry started at a young age, when his father who failed graduate studies in Chemistry, actively discouraged his young son from reading chemistry texts. And so Dick, like most of us presented with a forbidden activity, took to subterfuge and read said texts under his bed covers by torchlight. When it came to the practical aspects Dick bought his laboratory supplies from a local pharmacist and conducted his experiments in the basement of his house – all went well until he discovered the joys of burning magnesium.... Dick's formal Science education was courtesy of the University School in Cleveland and then Harvard University where he gained a double major in Chemistry and Physics followed by a PhD in Chemical Physics.

After university appointments across America Dick found his scientific home at Stanford where he has remained and where he is currently the Marguerite Blake Wilbur Professor in Natural Science. Throughout his career he has been strongly associated with the application of lasers in Chemistry, especially laser-induced fluorescence. Dick has developed fundamental techniques that permit researchers to use laser beams to detect and analyse tiny amounts of chemicals and the reactions they undergo. Applications of his techniques range from analytical chemistry to molecular biology to astrophysics. His research has been

published in approximately 1000 papers and he ranks amongst the top 25 most highly cited chemists alive today.

Dick is also an inspirational teacher. He is a pioneer in creating courses in Chemistry for non-scientists and first year undergraduate students and over 100 students have received their PhD degrees under his guidance. He is a dedicated civic scientist and has served in many advisory capacities including Chair of the National Research Council's Commission on Physical Sciences, Mathematics and Applications and chair of the National Science Board, a presidential appointment, where he had considerable influence over federal science policy.

A further string to Dick's bow is his support of women, a subject close to my own heart. When he became head of chemistry at Stanford he persuaded his colleagues that it was to the benefit of the department to provide paid maternity leave to women graduate students. Stanford then adopted a similar university-wide policy but the University only offered half of what Chemistry did.

Dick can best be described as an enthusiast with a joy for life. He strongly believes in people, is driven by curiosity and creative ability and is the most generous of human beings. Tales about Dick are numerous and legendary – my favourite being the story of him riding down a lecture theatre on his motorbike. I don't know if it's true or not but I want to believe it!

Mr Vice Chancellor, in recognition of his pioneering work in the field of Chemical Physics, I now invite you to confer on

Professor Dick Zare
the degree of Doctor of Science.