2007 MAE Departmental Seminars

Carbon Nanoparticles on a Scale of 10^{36}

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Abstract:
Certain types of carbon nanoparticle are highly resistant to radiation and have been present in the universe for billions of years. Their spectra in galactic and extra-galactic sources contain information on the composition of these particles, but this composition has not yet been fully replicated in the laboratory. I shall outline some characteristics of these particles as derived from astronomical spectra and discuss the results of experiments designed to reproduce these properties. The materials that we generate have a unique structure and exhibit novel properties that may be useful in terrestrial applications.

About the speaker:
Dr. Walt Duley is a Professor at the University of Waterloo, CANADA. He holds a B. Eng. degree from McGill University and PhD and DSc degrees in Physics from Imperial College, University of London. He is the author of numerous papers in Physics and Engineering and has written four books on laser applications in materials science. He is also the founder and former CEO of Powerlasers Ltd., a major supplier of laser-welded components and systems to the automotive industry.