



**Australian Institute of Physics  
NSW Branch (May Public Talk)**

**“ANSTO – Australian Physics in Action”**

**Dr George Collins  
Chief of Research, ANSTO**

**Tuesday 27<sup>th</sup> May 2008 @ 6.00PM**

At the

**Slade Lecture Theatre, School of Physics, University of Sydney**

**Public talk arranged by: The Australian Institute of Physics (NSW Branch)**

***Entrance is FREE***

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***Summary of talk:***

Physics and nuclear science and technology have a symbiotic relationship. Physics underpins much of nuclear science while nuclear techniques assist in solving some of the fundamental problems in physics. ANSTO is Australia’s centre of expertise in nuclear techniques and applications, many of which have strong links with physics.

In this talk Dr Collins will describe the range of research activities undertaken by ANSTO as well as the wide range of research facilitated by the techniques that ANSTO provides for the Australian research community. While Physics is fundamental, the applications are broad - in environmental research, radiopharmaceutical development, materials engineering as well as advancing the understanding of the structure and function of materials at the atomic, molecular and nano levels.





### ***Brief Biography of the Speaker:***

George Collins is Chief of Research for the Australian Nuclear Science and Technology Organisation (ANSTO). Although no longer an active researcher, he is committed to ensuring the success and relevance of the multidisciplinary research activities he facilitates. George obtained a PhD in plasma physics from the University of Sydney and spent 4 years in fusion related plasma physics at the Centre de Recherches en Physique des Plasmas within the Ecole Polytechnique Federale de Lausanne in Switzerland. He joined ANSTO in 1986 where he played the lead role in the development of Plasma Immersion Ion Implantation (PI<sup>3</sup>) as a high energy ion nitriding technique for enhancing the wear resistance of a wider range of metal alloys. His research influenced the general understanding of plasma nitriding and the mechanisms that occur in other plasma-assisted surface treatment and deposition techniques. ANSTO (PI<sup>3</sup>) equipment can be found in laboratories in the UK, Germany, Hungary, Singapore, Australia and Thailand.

In addition to leading ANSTO's activities in plasma surface engineering, George also led a multidisciplinary team in one of ANSTO's strategic research projects on new applications for thin oxide films. The intellectual property created in this project is currently being developed for applications as diverse as abrasion resistance coatings on spectacle lenses to nano-sized inorganic matrices for delivery and controlled release of chemotherapy drugs. George was appointed Director, ANSTO Materials & Engineering Science in December 2001, leading a team of 90 scientists, engineers and technicians involved in a wide-range of materials-based and engineering research projects. He has been in his current role since February 2005

### ***Detailed Schedule for Tuesday, 27<sup>th</sup> May 2008:***

- **6:00-6.30 pm** **REFRESHMENTS, Slade Lecture Theatre.**
- **6.35-7.30 pm** **LECTURE by Dr George Collins.**
- **8.00 pm** **DINNER with the Speaker at Buon Gusto (Italian), 368 Abercrombie Street, Chippendale.**  
***E-mail Dr Fred Osman ([fred\\_osman@exemail.com.au](mailto:fred_osman@exemail.com.au)) if you will be able to join us for dinner.***

### ***Travel Directions:***

- Train to Redfern station and walk to the **School of Physics**.
- Buses 422, 423, 426, 428, 448, and 450 from Circular Quay to City Road / King, or 412, 435, 438, 470, 483 etc. along Parramatta Road from Circular Quay.
- Drive and park in various parking lots. You will need to pay for parking (**\$6 flat-rate after 4 pm**) and display the ticket in your car. You may also find parking places on public roads outside the Uni.

### ***Event sponsored by:***



***The Australian Institute of Physics – NSW Branch  
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