RSC Advancing the Chemical Sciences
Environmental Chemistry Group

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London and South East Branch

National Trust

THE NATIONAL GALLERY

The science behind our cultural heritage

Didn't think you could combine physics, chemistry and art? Then think again. These twin lectures explore how physics and chemistry harm - and can protect some of the country's most precious art collections.

Institute of Physics, 76 Portland Place, London.
Wednesday 23rd October 2013

Tea and coffee from 6pm. Talks start at 6.30 until 8.15. Refreshments available after the lectures.
To ensure sufficient space & catering, please register with Sally Brown stating which organisation you belong to (sb20@soton.ac.uk, 02380 594796)

Heat, moisture and the preservation of art collections in historic houses

Dr Nigel Blades, Preventive Conservation Adviser (Environment), National Trust

This presentation will describe the approach adopted by the National Trust to control the environment of country houses for the care and display of paintings and decorative art collections. It will describe types of damage caused by poor environmental conditions of temperature and relative humidity, and how damage can be avoided by careful design and operation of house heating systems. The heating technologies of the past will be discussed, particularly developments in the Victorian era, and how new technologies affected the comfort of both people and collections. Examples will be presented of how an awareness of the potential for damage from poorly controlled heating led in turn to improvements in heating and environmental control systems in museums and galleries, for better preservation of works of art.

Dr Nigel Blades is Preventive Conservation Adviser (Environment) for the National Trust. His main role is to advise on environmental control solutions and preventive conservation for the care of collections in the Trust's historic properties. Before joining the National Trust in 2008 Dr Blades was Lecturer at the UCL Centre for Sustainable Heritage, where he was joint course director for the MSc Sustainable Heritage and undertook research into preventive conservation.

Considering the effect of light on old master paintings

Joseph Padfield, Conservation Scientist, The National Gallery

All visible light is potentially damaging to works of art, but we can not see the art without it. We need to balance the aesthetic presentation against light exposure and now, we also need to consider the environmental implications of the lighting solutions used. This talk will introduce some examples of the effect of light on old master paintings and some of the processes that have been used to minimise light induced degradation. The lighting solutions that have been implemented within the National Gallery will also be discussed, including the recent introduction of LED lighting throughout the main floor galleries. Examples will also be given to describe how different types of light sources are measured and compared within the National Gallery and how damage functions and spectral power distribution curves have been used to help explain and present colour science to conservators and curators.

Joseph Padfield gained a BSc Chemistry from Edinburgh University and a MA in Conservation of Fine Art from the University of Northumbria, followed by a two year post graduate internship at the Hamilton Kerr Institute, Cambridge University, where he carried out practical conservation and analytical analysis. He joined the National Gallery in 2000, where he now works conducting research into digital imaging, preventive conservation, database development, cultural heritage ontologies, the semantic web and the digital storage & dissemination of cultural heritage information.