

# HIRSCH LECTURE 2019

4:30pm, Friday 8 February 2019

## 'Triboreacted materials as functional interfaces in internal combustion engines and medical implants'

Lecture Room 1, Thom Building,  
Department of Engineering Science, Parks Road, Oxford

### Professor Anne Neville

OBE, FEng, FRS, FRSE

*RAEng Chair in Emerging Technologies*

*Professor of Tribology and Surface Engineering,  
University of Leeds*



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**4pm Afternoon Tea** (Holder Common Room)

**4:30pm Hirsch Lecture** (Lecture Room 1, Thom Building)

**5:30pm - 7pm Drinks Reception** (Holder Common Room)

*Dress code: smart/casual*

### Abstract:

Reducing CO<sub>2</sub> and particulate emissions to halt global warming and improve the air cleanliness in developed and developing nations is urgent. A similarly large challenge is the provision of medical implants that will serve the ageing population. Both challenges are underpinned by the need to understand important functional interfaces.

This talk will focus on the engine and the hip and will present how an understanding of the interactions between tribology and chemistry/corrosion play a crucial role in the interfacial friction, wear and integrity. The integration of state-of-the-art surface science with engineering simulations in both of these areas enables engineers to create optimised systems with improved performance.

Reserve afternoon tea/drinks reception by emailing [lorraine.laird@materials.ox.ac.uk](mailto:lorraine.laird@materials.ox.ac.uk)



# Materials Science

## Teachers CPD Workshop 2019

Friday 8 February 2019

13:30-16:30

Before the lecture, we are offering a Teacher CPD workshop, delivered by the department's Schools Liaison Team. The workshop aims to showcase latest developments in materials science and make available resources we have developed for hands-on experiments in schools. These activities are designed to support the teaching of materials science and raise awareness of this discipline as an option for your science students to pursue at tertiary education. We will provide an overview of our applications and admissions process and plenty of opportunities to ask questions.

Please reserve your place at the CPD workshop and lecture by either completing and returning the attached application form to Ms Lorraine Laird, or emailing her with your details ***no later than Wednesday 6<sup>th</sup> February***. More than one teacher per school may attend, but a separate form for each must be completed and returned by the closing date. Photocopies of the form are acceptable, or it can be downloaded from [our webpage](#). Forms may be returned by post, or email, but must arrive before the closing date.

***First come, first served: places are limited***

Time	Activity	Venue
From 13:30	Registration (coffee & biscuits)	Hume-Rothery Building Reception Foyer
13:45 to 16:00	CPD Workshop and Department Tour	Meeting Room, Teaching labs, Materials Dept
16:00-16:30 16:30-17:30 17:30-19:30	Tea and cakes Hirsch Lecture Drinks Reception	Holder Common Room Lecture Room 1, Thom Building Holder Common Room

*Receipt of forms will be acknowledged, and places confirmed.  
Travel instructions and further information will follow*



M A T E R I A L S

### ***HIRSCH LECTURE 2019 / TEACHER WORKSHOP APPLICATION***

<i>Title</i>			
<i>First Name</i>			
<i>Last Name</i>			
<i>Dietary requirements</i>			
<i>Subject Taught</i>			
<i>Mobile</i>			
<i>Personal e-mail:</i>			
<i>School Name</i>			
<i>School Address-1</i>			
<i>School Address-2</i>		<i>School Town</i>	
<i>School County</i>		<i>School Postcode</i>	
<i>Name of student contact</i>			
<b><i>Please indicate:</i></b>			
I will attend the:	CPD Workshop	<input type="checkbox"/>	Afternoon Tea/Hirsch Lecture <b><i>(please state any dietary requirements)</i></b> <input type="checkbox"/>
I would like to be added to the Teachers email list for Outreach		<input type="checkbox"/>	Drinks Reception <b><i>(please state any dietary requirements)</i></b> <input type="checkbox"/>

***Completed forms must be returned to:***

Ms Lorraine Laird  
PA to Head of Department  
Oxford University Department of Materials  
16 Parks Road, Oxford OX1 3PH

e-mail: [lorraine.laird@materials.ox.ac.uk](mailto:lorraine.laird@materials.ox.ac.uk)  
Tel: 01865 273 737

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