



UK-Japan Workshop on High Energy Density Science

Celebrating 150 years of Anglo-Japanese friendship and scientific exchange

**Sponsored by
The JSPS (London Office),
and the Science and Technology Facilities Council**

**To be held at
The Royal Society,
6-9 Carlton House Terrace,
London
SW1Y 5AG**

Monday 15th December 2008

9.00 Registration and refreshments

9.30 Welcome

Prof. Peter Norreys (STFC) and Prof. Ryosuke Kodama (GSE, Osaka University)

9.40 Plenary – Intense Lasers

“UK and European developments in high intensity laser science – opportunities for collaboration”

Prof. Mike Dunne (STFC)

“High energy density science research at ILE Osaka University”

Prof. Kunioki Mima (Osaka University)

10.40 *Coffee and Tea*

11.00 Advances in Fast Ignition Inertial Fusion

“Progress in divergence control and energy transfer for cone-guided fast ignition”

Prof. Peter Norreys (STFC)

“Relativistic self-focusing in over-dense plasmas”

Prof. Kazuo Tanaka (GSE, Osaka University)

12.00 *Lunch*

13.00 Impact and Shock Ignition Approaches for Ignition

“Electron transport in shock ignition”

Prof. Tony Bell (University of Oxford)

“FIREX project status and role of impact ignition”

Prof. Hiroshi Azechi (ILE, Osaka University)

14.00 Ion Acceleration and Applications

“ ‘Radiation Pressure Acceleration’ – route to compact GeV ion beams”

Prof. Matt Zepf (Queens University of Belfast)

“Laser-driven ion acceleration at the Japan Atomic Energy Agency”

Dr. Alexander Pirozhkov (Japan Atomic Energy Agency)

15.00 Afternoon Tea

15.30 Development and Applications of Laser Wakefield Accelerators

“Energetic electrons and bright X-rays from laser accelerators”

Dr. Zulfikar Najmudin (Imperial College London)

“Related studies on laser wakefield acceleration”

Dr. Kiminori Kondo (Japan Atomic Energy Agency)

16.30 High Energy Density Laboratory Astrophysics

“Collisionless shocks and diffusive shock acceleration”

Dr. Nigel Woolsey (University of York)

“High power laser experiments to study collisionless shocks”

Ass. Prof. Yoichi Sakawa (ILE, Osaka University)

17.30 Close

19.30 Signing Ceremony, Reception and Buffet

Hosted by

Professor Yuko Furukawa (Director, JSPS London)

Professor Richard Wade (Deputy Chief Executive, STFC)

Tuesday 16th December 2008

9.00 New Photon Science Projects in UK and Japan

“High energy density science on 4th generation sources: a UK perspective”

Prof. Justin Wark (University of Oxford)

“Network project on photon science and technology in Japan”

Prof. Ryosuke Kodama (C-Phost JAEA, Osaka University)

10.00 Dense Plasma Atomic Physics

“Modelling atomic physics and other aspects of burning ICF plasmas”

Prof. Steven Rose (Imperial College London)

“High power laser-matter interactions and energy transport with atomic processes”

Prof. Yasushi Kishimoto (Kyoto University)

11.00 Coffee and Tea

11.15 Warm Dense Matter and High Pressure Condensed Matter

“Probing the structure of warm dense matter”

Dr. David Riley (Queens University Belfast)

“Possibility for stable, monoatomic solid metallic hydrogen”

Ass. Prof. Kazunori Shibata (GSE, Osaka University)

“Broadband optical properties of warm dense matter”

Ass. Prof. Hitoki Yoneda (University of Electro-Communications, Tokyo)

12.45 Summary

Prof. Peter Norreys

Prof. Ryosuke Kodama

13.00 Lunch

14.00 Close