the first Bristol-Kyoto symposium 2013
Over the last 4 years a strategic relationship has been growing between Kyoto University and University of Bristol as both universities engaged with the challenges of internationalisation and the opportunities it might offer their top quality research activities.

The relationship is built on a number of informal collaborations but formal links started around research commercialisation in 2008 resulting in a Memorandum of Understanding between the division of Research and Enterprise Development at University of Bristol and Kyoto University’s Office of Society-Academia Collaboration for Innovation (SACI).

A series of workshops in specific areas have subsequently been held in both Bristol and Kyoto (including in Communications Engineering; Translational Medicine; Natural Hazards and Disaster Prevention). These have led to active links between University of Bristol’s Severnside Alliance for Strategic Research (SARTRE, now prosecuted through the Elizabeth Blackwell Institute for Health Research) and between the Cabot Institute and complementary organisations at Kyoto.

The collective strength of this activity resulted in an institutional Memorandum of Understanding between KU and UoB signed in 2011. This signalled an intention to work together at an institutional level across a wide range of disciplines, and was the catalyst to develop a major joint symposium to explore and develop collaborative research.

The award of a grant from EPSRC, under their Building Global Engagements in Research programme and concurrent investment from both Universities, has enabled a further step in the relationship by funding a series of visits to Kyoto and, in part, this symposium.

The purpose of this 1st Bristol - Kyoto Symposium is to develop new relationships, to move existing collaborations to a deeper understanding and to build new collaborative research opportunities and activities. We aim over these two days to develop joint research activities and plan sustainable interactions.

Then University of Bristol is delighted to welcome over 90 delegates from Kyoto and pleased that more than 150 will be participating from Bristol including members of academic, research and professional staff, research students, research funders and sponsors and partners from the public and private sectors.
Welcome from Professor Eric Thomas

A very warm welcome to the 1st Bristol-Kyoto Symposium. We are extremely excited to host discussions in so many different disciplines between our two Universities. This provides a wonderful opportunity to build upon our existing collaborations. It also allows us to explore new relationships with Kyoto University’s world-class researchers.

Bristol is an internationally distinguished research university with world-leading academics and rising stars. We believe in the importance of working with strategic global partners in order to meet the demands of the 21st century. We have an institutional mission to seek and share both knowledge and understanding, and to help individuals and society fulfil their potential. International collaboration is central to realising this aim.

The University of Bristol has a diverse population. We have students from 120 countries that share their culture and experiences, and contribute to the vibrancy of university life. At the beginning of last year the Universities of Bristol and Kyoto signed a Memorandum of Understanding. This was a formal commitment to collaborate in the future. We are delighted that we will now extend this agreement to include opportunities for postgraduate students to move freely between our institutions.

This first joint symposium brings together over 200 researchers from our two Universities for two days of intellectual discourse. This reflects our commitment to our staff and students; we believe it is vital that they gain new experiences and perspectives; at all stages of their career we will support and encourage them to build and develop international collaborations. I wish all the participants productive exchanges throughout the symposium and welcome you to Bristol.

Eric Thomas
Vice Chancellor, University of Bristol

Welcome from Professor Hiroshi Matsumoto

I am delighted to see this 1st Bristol-Kyoto Symposium realized thanks to the tremendous efforts of leading researchers from both institutions.

Established in 1897, Kyoto University is now in its 115th year. During its lifespan, the university has been dedicated to advancing world-class higher education and cutting-edge research. In keeping with the rich cultural traditions of its birthplace - Kyoto City - it has maintained and developed its own distinct culture of academic freedom, seeking to contribute to society and promote harmonious coexistence within the world’s human and ecological community.

The university has evolved into a comprehensive institution with ten faculties, seventeen graduate schools, fourteen research institutes, and twenty other education and research facilities. As an internationalized university, we are constantly expanding the scope of our collaboration and exchange with education and research institutions throughout the world.

Our international partnerships include several long-standing relationships with institutions in the United Kingdom. To date we have concluded nine international exchange agreements and seven student exchange agreements with leading universities in the UK. Under those agreements, significant numbers of our researchers and students visit the UK annually to engage in joint research and to broaden their own horizons.

Our formal partnership with Bristol University was begun fairly recently, but has developed rapidly. Our institutions concluded a departmental agreement for cooperation on industry-academia collaboration in 2008, a General Memorandum for Academic Cooperation and Exchange in 2011, and, most recently, a Student Exchange Agreement in 2012. We are looking forward, therefore, to developing the student exchange component of our cooperative activities in the near future.

In February 2009, Kyoto University opened its European Representative Office in London as a base of operations for industry-academia collaboration activities in Europe. Since then, we have endeavored to make the office a hub for a global network for industry-academia collaboration with universities and international businesses not only the UK, but throughout Europe. We have placed a particular emphasis on forming trilateral links with existing European university-industry partnerships.

The 1st Bristol-Kyoto Symposium brings together internationally respected researchers from both institutions, and aims, through its varied sessions, speeches, and workshops, to promote the advancement of scholarship in the natural and social sciences. It is my sincere hope that the symposium will also serve to further strengthen our already robust partnership. In closing, I would like to express, on behalf of Kyoto University, our gratitude to Bristol University for their cooperation, generosity, and great efforts towards realizing this event.

Hiroshi Matsumoto
President, Kyoto University
The process of globalisation in terms of our economy and society is accelerating, while we cannot ignore a number of problems of global scale, such as climate change, energy shortages and natural disasters. Such issues cannot be addressed by any one country alone, but need to be tackled by humanity on an international scale. As standard-bearers in the fields of science and technology, Japan and the UK should aim to take the lead in addressing these challenges and to share with the world the fruits of our efforts.

For this reason, Japan and the UK hold a Joint Committee, enjoying the participation of high-level government officials, approximately every two years, based on the Agreement between the UK and Japanese Governments on Co-operation in Science and Technology. Most recently, in November of last year, the eighth such meeting was held in London and a keen exchange of views took place on co-operation in such areas as natural disasters, energy issues, medical science, industry-academia collaboration and personnel exchange. Furthermore, when the British Prime Minister David Cameron visited Japan in April, there was discussion on taking Japan-UK co-operation in science and technology to the next level.

From this point of view, I trust that this 1st symposium between University of Bristol and Kyoto University, both high influential universities in the UK and Japan, will serve as a catalyst not only to engage in the broader collaboration between both universities, but also to open the new page of the co-operation in Science and Technology between the UK and Japan. As I graduated from Kyoto University in 1974, I’m very happy to have this opportunity to attend and make a speech at the Symposium. I would like to offer my best wishes for the success of the Symposium, which I am sure, will stimulate the ever closer links between our two countries to become even stronger and more forward-looking.

Stephen Mann is Professor of Chemistry, Director of the Centre for Organized Matter Chemistry, and Principal of the Bristol Centre for Functional Nanomaterials at the University of Bristol, UK. His research interests are focused on the chemical synthesis, characterization and emergence of complex forms of organized matter, including models of protocell assembly. He has published over 400 scientific papers, with a h index of 90, and has served on the editorial advisory boards of numerous journals including Advanced Materials, Angewandte Chemie, Chemical Science and Small. Prof. Mann was elected as a Fellow of the Royal Society, UK, in 2003. In 2011, he received the Royal Society of Chemistry de Gennes Medal, and was a recipient of the Chemical Society of France, French-British Prize.

Keynote Speech: In search of Protolife

Susumu Kitagawa received his PhD at Kyoto University in 1979. After Kinki University and Tokyo Metropolitan University, he moved to Kyoto-University as Professor of Functional Chemistry in 1998. He is now Deputy Director of Institute for Integrated Cell-Material Sciences (WPI-IceMS) at Kyoto University. He developed chemistry of coordination space and provided new porous materials. He was awarded The Medal with Purple Ribbon 2011 (The Japanese Government), Thomson Reuters Citation Laureate (Chemistry) in 2010, The Chemical Society of Japan Award, Japan (2009), Humboldt Research Award, Germany (2008), The Japan Society of Coordination Chemistry Award, Japan (2007).

Keynote Speech: The Future of Chemistry in Small Spaces
University of Bristol

Introduction

History and Mission
The University was founded in 1876 as University College, Bristol. It was the first higher education institution in England to admit women on an equal basis to men. Its stated mission is to pursue and share knowledge and understanding, both for their own sake and to help individuals and society fulfill their potential.

The University of Bristol is:
- Dedicated to academic achievement across a broad range of disciplines, and to continuous innovation and improvement.
- Research-intensive, supporting both individual scholarship and interdisciplinary or thematic research of the highest quality.
- A centre for intellectually demanding, research-informed education that nurtures independence of mind and helps students achieve their personal goals and serve society’s needs, both during and after their time here.
- An inclusive and collaborative community of scholarship that attracts and retains people with outstanding talent and potential from all walks of life and all parts of the world.
- In the last Research Assessment Exercise, 93 per cent of Bristol’s research was deemed to be of International standard, with over 61 percent assessed as ‘world leading’.

The University organises its academic affairs in some 25 academic schools which are arranged into six faculties, 2 University Institutes and many research centres.

Outstanding opportunities to pursue doctoral study:
The Wellcome Trust
- Molecular, Genetic and Life-course Epidemiology
- Dynamic Cell Biology
- Neural dynamics: from synapses to systems in health and disease

Engineering and Physical Sciences Research Council
- Bristol Centre for Complexity Science
- A Holistic Training Centre for Chemical Synthesis
- Advanced Composites Centre for Innovation and Science
- Industrial Doctorate Centre: Systems
- Doctoral Training Centre in Functional Nanomaterials
- Future Communications: People, Power and Performance

Economics and Social Research Council
- South West Doctoral Training Centre (with Exeter and Bath)

Biototechnology and Biological Sciences Research Council
- South West Doctoral Training Partnership (with Exeter, Bath and Plymouth)

Medical Research Council
- In Vivo Systems Neuroscience

Statistics
- 17,695 full-time students
- 3,600 international students from 120 countries
- Bristol graduates in over 180 countries

Some Research Impact Highlights
- ‘Beating heart’ surgery pioneered at Bristol leading to improved outcomes and 25% cost-savings per patient
- Wireless technology developed at Bristol that led to the mobile phone
- Cost death research that changed medical advice leading to the “Back to Sleep” campaign. Assessed to have prevented over 100,000 infant deaths worldwide

World-leading research
- Four Bristol research projects named in Time magazine’s top 10 medical breakthroughs and scientific discoveries
- Bristol neonatal research preventing brain injury in newborns
- Discovery of the first virus proved to cause cancer
- Bristol animal welfare research is driving international agendas
- The Bristol Laboratory for Advanced Dynamics Engineering (BLADE) is the most advanced of its kind in Europe
- The Centre for Nanoscience and Quantum Information - vibration and noise levels the lowest ever achieved
- Ranked in the top 100 worldwide for economics, sociology, accountancy and finance, top 50 for international relations and law
- Alfred Marshall, founder of modern economics held the first chair in economics at Bristol
- Bristol’s social policy research featured in UNICEF’s compendium of 12 exemplary projects on child focused social and economic policy
- Bristol’s department of Drama, Theatre, Film & Television was the first department dedicated to the study of performance at a British university
- Home to the Penguin Archive - showcasing these groundbreaking books from their foundation in 1935 to the present day
- Host of the Mander Metechinson collection - the world’s largest theatre collection dedicated to British theatre history

An Entering University
Bristol is ranked first in the top 25 smaller ‘European cities of the future 2012 / 2013’
- Bristol’s SEiTquared business acceleration centre supports over 40 businesses and has raised over £40 million in equity and grant funding
- Host of the UK’s National Composites Centre

Kyoto University states its mission to sustain and develop its historical commitment to academic freedom and to pursue harmonious coexistence within the human and ecological community on this planet.

Foundation
- Established in 1897
- The second imperial university in modern Japan
- Research oriented, rather than training future officials
- Tradition of pioneering fieldswork
- Reflecting philosophic traditions of Kyoto

Basic Information
- Number of Students:
  - Undergraduate - 13,551
  - Graduate - 9,244
- Number of Faculty - 2,831
- Non-teaching staff - 2,608
- Finance (Unit: million yen)
  - Revenues in FY 2011 - 150,770
  - Expenses in FY 2011 - 145,928

Facilities
- 3 Campuses located in Kyoto City
- 10 Faculties
- 17 Graduate Schools
- 14 Research Institutes
- 27 Research and Educational Centers
- 49 Overseas Offices and Facilities

Organisational Listings:
Undergraduate Faculties
- Faculty of Integrated Human Studies
- Faculty of Letters
- Faculty of Education
- Faculty of Law
- Faculty of Economics
- Faculty of Science
- Faculty of Medicine
- Faculty of Pharmaceutical Sciences
- Faculty of Engineering
- Faculty of Agriculture

Graduate Schools
- Graduate School of Letters
- Graduate School of Education
- Graduate School of Law
- Graduate School of Economics
- Graduate School of Science
- Graduate School of Medicine
- Graduate School of Pharmaceutical Sciences
- Graduate School of Engineering
- Graduate School of Agriculture
- Graduate School of Human and Environmental Studies
- Graduate School of Energy Science
- Graduate School of Asian and African Studies
- Graduate School of Informatics
- Graduate School of BioStudies
- Graduate School of Global Environmental Studies
- School of Government
- Graduate School of Management

Research Institutes
- Institute for Chemical Research
- Institute for Research in Humanities
- Institute for Frontier Medical Sciences
- Institute of Advanced Energy
- Research Institute for Sustainable Humanosphere
- Disaster Prevention Research Institute
- Yukawa Institute for Theoretical Physics
- Institute for Virus Research
- Institute of Economic Research
- Research Institute for Mathematical Sciences
- Research Reactor Institute
- Primate Research Institute
- Center for Southeast Asian Studies
- Center for IPS Cell Research and Application

Awards: 8 Nobel Prizes, 2 Field Medals, 1 Gauss Prize, 4 Lasker Awards, 2 Japan Prizes, 3 Kyoto Prizes

Research and Educational Centers
- Academic Center for Computing and Media Studies
- Radiation Biology Center
- Center for Ecological Research
- Center for Integrated Area Studies
- Wildlife Research Center
- Center for the Promotion of Excellence in Higher Education
- The Kyoto University Museum
- Research Center for Low Temperature and Materials Sciences
- Field Science Education and Research Center
- Fuku Institute for Fundamental Chemistry
- Kokoro Research Center
- Center for Cultural Heritage Studies
- Counseling Center
- Kyoto University Archives
- Education Unit for Global Leaders in Advanced Engineering and Pharmaceutical Sciences
- Unit of Synergetic Studies for Space
- Center for African Area Studies
- Center for Women Researchers
- Hakubi Center
- Center for the Promotion of Interdisciplinary Education and Research
- Institute for Integrated Cell-Material Sciences
- Institute for the Promotion of Excellence in Higher Education
- Agency for Health, Safety and Environment
- Organization for the Promotion of International Relations
- Institute for Information Management and Communication
- Library Network
- Office of Society-Academia Collaboration for Innovation
Global Bristol

As well as the strategic partnership with Kyoto University the University of Bristol has affiliations with many other institutions around the world and we are an active member of the following organisations:

Worldwide Universities Network (WUN)
The Worldwide Universities Network (WUN) is a global partnership of research-intensive universities. The WUN alliance exists to make significant advances in knowledge and understanding in areas of current global concern. By fostering and encouraging collaboration between members, WUN brings together the experience, resources and expertise necessary to address the challenges and opportunities currently facing societies, governments, business and education.

Association of Commonwealth Universities (ACU)
Established in 1913, the Association of Commonwealth Universities (ACU) is the world’s oldest association of international universities. It is also one of the largest, with over 500 members from Commonwealth countries. The ACU’s mission is to serve member institutions by advancing international co-operation and understanding in higher education, and by providing a broad range of services and facilities.

The Coimbra Group
The Coimbra Group is committed to creating special academic and cultural ties in order to promote, for the benefit of its members, internationalisation, academic collaboration, excellence in learning and research, and service to society.

Partner Universities & Consortia
- 93 university-level academic memoranda
- Over 500 faculty-level, exchange and cooperation agreements

University-level Academic Memoranda
Asia: 30
- China: 11
- Indonesia: 3
- Korea, R. 6
- Laos: 1
- Malaysia: 1
- Singapore: 1
- Thailand: 3
- Vietnam: 3
- Taiwan: 2

Europe: 36
- Austria: 1
- Belgium: 1
- Czech Republic: 1
- Finland: 1
- France: 4
- Germany: 8
- Italy: 3
- Netherlands: 2
- Sweden: 3
- Switzerland: 2
- UK: 9
- Russia: 1
- Turkey: 1

Africa: 3
- Botswana: 1
- Egypt: 1
- Sudan: 1

North America: 15
- USA: 12
- Canada: 3

Latin America: 1
- Mexico: 1

Middle East: 2
- Israel: 1
- Turkey: 1

Oceania: 6
- Australia: 5
- New Zealand: 1

Overseas Research Facilities: 49
- Euro Representative of Kyoto University SACI, London
- Primate Res. Site Botswana
- Vietnam National University, Hanoi - Kyoto University Collaboration Office
- Jakarta Residence, CSEAS
- Equatorial Atmosphere Rader Indonesia
**Wednesday 9th January**

<table>
<thead>
<tr>
<th>Time</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>19:00-20:00</td>
<td>Arrival, check in and registration</td>
</tr>
<tr>
<td>20:00-21:30</td>
<td>Drinks reception, light buffet and networking</td>
</tr>
</tbody>
</table>

**Thursday 10 January**

<table>
<thead>
<tr>
<th>Time</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Coffee / tea and registration</td>
</tr>
</tbody>
</table>

Chair: Professor Guy Orpen

<table>
<thead>
<tr>
<th>Time</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00-09:45</td>
<td>Vice Chancellor Professor Eric Thomas Welcome remarks</td>
</tr>
<tr>
<td>09:45-10:00</td>
<td>President Hiroshi Matsumoto Welcome remarks</td>
</tr>
<tr>
<td>10:00-10:15</td>
<td>Pro Vice Chancellor Professor Guy Orpen “Research at the University of Bristol: Strategy, partnerships and internationalisation”</td>
</tr>
<tr>
<td>10:15-10:30</td>
<td>Executive Vice President Kiyoshi Yoshikawa “Kyoto University: A Spirit of Academic Freedom and a Mission to Seek Harmonious Global Co-Existence”</td>
</tr>
<tr>
<td>10:30-10:45</td>
<td>Keynote Speech - Professor Stephen Mann “In Search of Protolife”</td>
</tr>
<tr>
<td>10:45-11:15</td>
<td>Coffee break</td>
</tr>
</tbody>
</table>

Chair: Professor Mishima

<table>
<thead>
<tr>
<th>Time</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:15-11:45</td>
<td>Keynote Speech - Professor Susumu Kitagawa “The Future of Chemistry in Small Spaces”</td>
</tr>
<tr>
<td>12:15-13:30</td>
<td>Lunch</td>
</tr>
<tr>
<td>13:30-16:00</td>
<td>Parallel sessions (1)</td>
</tr>
<tr>
<td>16:00</td>
<td>Return to hotel</td>
</tr>
</tbody>
</table>

Chair: Vice Chancellor Professor Eric Thomas

<table>
<thead>
<tr>
<th>Time</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:30-18:00</td>
<td>Dr Jane Nicholson, Engineering and Physical Sciences Research Council (EPSRC) Funding opportunities for collaborative research ss Great Britain (Brunel Institute conference facility)</td>
</tr>
<tr>
<td>18:00-18:30</td>
<td>Professor Hiramatsu and Dr Polly Watson, Japan Society for the Promotion of Science (JSPS) Funding opportunities for collaborative research (Brunel Institute conference facility)</td>
</tr>
<tr>
<td>18:30</td>
<td>Drinks reception</td>
</tr>
<tr>
<td>19:30-23:30</td>
<td>Dinner followed by optional tours of the ship</td>
</tr>
</tbody>
</table>

**Friday 11 January 2013**

<table>
<thead>
<tr>
<th>Time</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00-12:30</td>
<td>Parallel sessions (2)</td>
</tr>
<tr>
<td>12:30-13:30</td>
<td>Lunch</td>
</tr>
<tr>
<td>13:30-15:00</td>
<td>Parallel session (3)</td>
</tr>
<tr>
<td>15:00-15:30</td>
<td>Coffee / tea</td>
</tr>
</tbody>
</table>

Chair: Professor Nick Lieven

<table>
<thead>
<tr>
<th>Time</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>15:30-17:30</td>
<td>Plenary wrap up (reports back from each parallel session)</td>
</tr>
<tr>
<td>17:30-17:45</td>
<td>Final Remarks</td>
</tr>
<tr>
<td>17:45</td>
<td>Close</td>
</tr>
</tbody>
</table>

**Parallel Session list**

<table>
<thead>
<tr>
<th>Session number</th>
<th>Session title</th>
<th>Venue</th>
<th>Map reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Organic Chemistry / Inorganic Chemistry</td>
<td>Chemistry, W415</td>
<td>11</td>
</tr>
<tr>
<td>2</td>
<td>Nanotechnology, Mesoscopic Science, and Stem Cell Biology</td>
<td>Nano Science and Quantum Information Building</td>
<td>37</td>
</tr>
<tr>
<td>3</td>
<td>Novel Quantum Phases of Condensed Matter</td>
<td>Physics, 3.21</td>
<td>33</td>
</tr>
<tr>
<td>4</td>
<td>Energy</td>
<td>MVB 3.36 (Day 1) MVB 4.01 (Day 2)</td>
<td>25</td>
</tr>
<tr>
<td>5</td>
<td>Design and Robotics</td>
<td>Queens Building 1.92 (Day 1) Bristol Robotics Lab (Day 2)</td>
<td>20</td>
</tr>
<tr>
<td>6</td>
<td>Elizabeth Blackwell Institute sponsored sessions</td>
<td>Senate House; 3.16</td>
<td>43</td>
</tr>
<tr>
<td>7</td>
<td>Social Science and Law</td>
<td>G2, 10 Priory Road</td>
<td>68</td>
</tr>
<tr>
<td>8</td>
<td>Economic Theory</td>
<td>Seminar rooms 1&amp;2, The Bristol Institute of public affairs</td>
<td>52</td>
</tr>
<tr>
<td>9</td>
<td>Faculty of Arts sponsored sessions</td>
<td>5 Woodland Road</td>
<td>66</td>
</tr>
<tr>
<td>10</td>
<td>Cabot Institute sponsored sessions</td>
<td>Hepple Lecture Theatre (Day 1) Hepple Lecture Theatre and Seminar room 1 Geographical Sciences (Day 2)</td>
<td>27</td>
</tr>
<tr>
<td>11</td>
<td>Mathematics</td>
<td>Queens Building, 1.68 (Day 1) School of Mathematics, BAM (Day 2)</td>
<td>20, 29</td>
</tr>
<tr>
<td>12</td>
<td>Psychology</td>
<td>Experimental Psychology, 12 A Priory Road</td>
<td>68A</td>
</tr>
<tr>
<td>13</td>
<td>Academic-Industry Partnership - 21st Century Models and Tools</td>
<td>Senate House; 3.15 (Day 1), National Composites Centre (Day 2)</td>
<td>43</td>
</tr>
</tbody>
</table>

**Thursday 10 January**

<table>
<thead>
<tr>
<th>Time</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>08:30</td>
<td>Coffee / tea and registration</td>
</tr>
</tbody>
</table>

Chair: Professor Guy Orpen

<table>
<thead>
<tr>
<th>Time</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>09:00-09:45</td>
<td>Vice Chancellor Professor Eric Thomas Welcome remarks</td>
</tr>
<tr>
<td>09:45-10:00</td>
<td>President Hiroshi Matsumoto Welcome remarks</td>
</tr>
<tr>
<td>10:00-10:15</td>
<td>Pro Vice Chancellor Professor Guy Orpen “Research at the University of Bristol: Strategy, partnerships and internationalisation”</td>
</tr>
<tr>
<td>10:15-10:30</td>
<td>Executive Vice President Kiyoshi Yoshikawa “Kyoto University: A Spirit of Academic Freedom and a Mission to Seek Harmonious Global Co-Existence”</td>
</tr>
<tr>
<td>10:30-10:45</td>
<td>Keynote Speech - Professor Stephen Mann “In Search of Protolife”</td>
</tr>
<tr>
<td>10:45-11:15</td>
<td>Coffee break</td>
</tr>
</tbody>
</table>

Chair: Professor Mishima

<table>
<thead>
<tr>
<th>Time</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:15-11:45</td>
<td>Keynote Speech - Professor Susumu Kitagawa “The Future of Chemistry in Small Spaces”</td>
</tr>
<tr>
<td>12:15-13:30</td>
<td>Lunch</td>
</tr>
<tr>
<td>13:30-16:00</td>
<td>Parallel sessions (1)</td>
</tr>
<tr>
<td>16:00</td>
<td>Return to hotel</td>
</tr>
</tbody>
</table>

Chair: Vice Chancellor Professor Eric Thomas

<table>
<thead>
<tr>
<th>Time</th>
<th>Venue</th>
</tr>
</thead>
<tbody>
<tr>
<td>17:30-18:00</td>
<td>Dr Jane Nicholson, Engineering and Physical Sciences Research Council (EPSRC) Funding opportunities for collaborative research ss Great Britain (Brunel Institute conference facility)</td>
</tr>
<tr>
<td>18:00-18:30</td>
<td>Professor Hiramatsu and Dr Polly Watson, Japan Society for the Promotion of Science (JSPS) Funding opportunities for collaborative research (Brunel Institute conference facility)</td>
</tr>
<tr>
<td>18:30</td>
<td>Drinks reception</td>
</tr>
<tr>
<td>19:30-23:30</td>
<td>Dinner followed by optional tours of the ship</td>
</tr>
</tbody>
</table>
Bristol is situated in the South West of England but only 90 minutes from London by train. The city is well connected as a major road and rail network hub and also has a busy international airport. The region is known for its engineering, IT and creative Industries, and the city is home and workplace to scientists, engineers, academics and artists of many different kinds.

The University is at the heart of Bristol in the historic district of Clifton. Among our 370 buildings are many architectural treasures, including the iconic Wills Memorial Building, the Victoria Rooms (where Charles Dickens and Oscar Wilde gave public readings), and Royal Fort House, built in the 18th century on the site of fortifications from the English Civil War. Newer buildings include the latest in contemporary design and engineering, like the Dorothy Hodgkin Building (housing the Henry Wellcome Laboratories for Integrative Neuroscience and Endocrinology), the Synthetic Chemistry Building, and the brand new Nanoscience and Quantum Information Building, which has state-of-the-art specialised laboratories whose vibration and acoustic noise levels are amongst the lowest achieved anywhere world-wide. Close at hand are Bristol City Museum and Art Gallery, and Brandon Hill, thought to be Bristol’s oldest park, with Cabot Tower offering a panorama of the city.

Bristol is a thousand years old but right at the cutting edge; dynamic yet laid back; culturally rich but down to earth; independent but influential.

Located in the western area of Japan known as the Kansai region, Kyoto is the country’s sixth largest city, with a population of approximately 1.5 million. Kyoto was Japan’s capital for over a thousand years, from 794 to 1868, and to this day continues to be regarded as the nation’s cultural heartland.

The city’s dense concentration of well-preserved historical and cultural sites - including approximately two-thousand Buddhist temples and Shinto shrines, as well as numerous palaces, traditional gardens and other places of interest - make the city a popular destination for both international and domestic tourists. It has been said that without knowing Kyoto, one cannot really know Japan.

While Kyoto continues to carefully value and conserve its traditional culture and history, the city is also recognized for its distinct spirit of innovation and progressive thinking. That spirit is reflected in many aspects of the city, from its rich heritage of modern philosophy, to its legacy of frontier science and technology. As a result, Kyoto is the birthplace and home of many successful international businesses. Another salient feature of the modern side of Kyoto’s persona is the city’s commitment to international outreach and cultural exchange. Through proactive engagement in international research and education cooperation, and by hosting major international events such as the Third Conference of the Parties (COP3) of the United Nations Framework Convention on Climate Change (UNFCCC) in 1997, the city seeks to play a major role in deepening mutual understanding between nations, and in striving towards a peaceful and secure future.
Symposium accommodation
Symposium delegates are staying at the Bristol Marriott Royal Hotel (no.1 on map).

Travel information
Symposium location
The University of Bristol is situated in the heart of the city within easy walking distance of local attractions and amenities. All symposium sessions workshops will take place in the University Precinct (see Programme for details) unless otherwise specified in your symposium folder.

The welcome reception will be held on 9th January from 8pm in the Bristol Marriott Royal Hotel.

The Plenary events (10 and 11 January) will take place in the Chemistry building (no.2 on map).

Registration will be held at the Bristol Mariott Royal (from 7-8.30pm Wednesday 9 January 2013) and in Chemistry East Foyer from 8.30am Thursday 10th January 2013.

The symposium dinner will be on the ss Great Britain (map reference). Kyoto visitors will be escorted from Bristol Mariott Royal to take a boat boarding at 4.45pm. Coaches will return to the hotel at 10.30 and 11.30 pm. Taxis can be ordered by calling one of the numbers given on this page.

Getting to Bristol
Most delegates will be arriving London Heathrow (a coach pick up from Heathrow provided by the symposium organisers). From London Heathrow, should you not be able to join the BU-KU pick up, there is a direct National Express Coach service between Heathrow and Bristol. Alternatively, you can take the Heathrow Airport Express to London Paddington and a First Great Western train from Paddington to Bristol.

By train: Please be advised that there are two mainline railway stations in Bristol: Temple Meads and Parkway. If you have a choice, you are advised to arrive at Temple Meads, as it is much closer to the University precinct with direct buses from the station. If you are travelling to Bristol by train on a weekday, fares are much higher during rush hour (about 8-11am and 4-6.30pm). Fares can be considerably lower if you buy your tickets in advance. Tickets can be bought online through National Rail.

From Temple Meads railway station you can take a taxi (approx. £8-9).

WIFI access at the symposium
You can access the internet at your hotel - the Bristol Marriott Royal

Local amenities and services
Banks and currency exchange
There are several banks with 24 hour automatic tellers on the right hand side of Queens Road, including NatWest and Barclays. There is an American Express Office further up Queens Road towards the University precinct.

Chemists
Boots the Chemist, 66 Queens Road, Clifton.

Emergency services
- Emergency Services: telephone 999
- University of Bristol Security Services: 0117 928 7848
- Avon & Somerset Constabulary: 0845 456 7000
- Bristol Royal Infirmary: 0117 923 0000
- NHS Direct (medical advice): 0845 464 467

Post Office
Local Plus, 12 Baldwin Street, BS1 1SA .

3 Cotham Hill, Cotham BS6 6LD (0.6 miles).

Printing and photocopying
Mailboxes, 42 Triangle West, BS8 1ES .

Opening hours:
Monday to Friday 09.00-17.30. Saturday 10.30-13.30

Prices (per A4 Black & White sheet):

Taxis
The nearest taxi rank to most symposium venues is on Queens Road, Clifton. The stand is outside the NatWest bank.

- Cabot Taxis: 0117 935 0524
- V Cars: 0117 925 2626
- Streamline: 0117 926 4001
- Bristol Brunel Taxis: 0117 924 7247

Tourism
Visit Bristol (Bristol’s official tourist information site):
visitbristol.co.uk

Bristol City Council What’s On:
whatsonbristol.co.uk

For access within the University precinct please refer to the guide in your symposium folder.
<table>
<thead>
<tr>
<th>Session / Role</th>
<th>Name</th>
<th>Department of Affiliation</th>
<th>Email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive</td>
<td>Nick Layen</td>
<td>Pro Vice Chancellor, University of Bristol</td>
<td><a href="mailto:niclayen@bristol.ac.uk">niclayen@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Noah Lindan</td>
<td>Mathematics</td>
<td><a href="mailto:n.lindan@bristol.ac.uk">n.lindan@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Paul Norman Jones</td>
<td>Chemistry</td>
<td><a href="mailto:pnorm@bristol.ac.uk">pnorm@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Paolo Maddeddu</td>
<td>Clinical Sciences</td>
<td><a href="mailto:p.maddeddu@bristol.ac.uk">p.maddeddu@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. Liam Malone</td>
<td>Physics</td>
<td><a href="mailto:Liam.Malone@bristol.ac.uk">Liam.Malone@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. Jason Marnell</td>
<td>Clinical Sciences</td>
<td><a href="mailto:j.marnell@bristol.ac.uk">j.marnell@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. Pablo Martinez</td>
<td>Biochemistry / Physiology and Pharmacology</td>
<td><a href="mailto:pmartinez@bristol.ac.uk">pmartinez@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Peter Matheson</td>
<td>Dean, Faculty of Medicine and Dentistry</td>
<td><a href="mailto:pmthomson@bristol.ac.uk">pmthomson@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. David May</td>
<td>Computer Science</td>
<td><a href="mailto:david.m@bristol.ac.uk">david.m@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. Balint May-Czirsa</td>
<td>Computer Science</td>
<td><a href="mailto:balint.may-czirsa@bristol.ac.uk">balint.may-czirsa@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Prof. Joe McKeever</td>
<td>Electrical and Electronic Engineering</td>
<td><a href="mailto:j.mckeever@bristol.ac.uk">j.mckeever@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Prof. Tony McMaster</td>
<td>Bristol Centre for Functional Nanomaterials</td>
<td><a href="mailto:t.mcmaster@bristol.ac.uk">t.mcmaster@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Prof. Phil Mellor</td>
<td>Electrical and Electronic Engineering</td>
<td><a href="mailto:phil.mellor@bristol.ac.uk">phil.mellor@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. Jamie Marmott</td>
<td>Biological Sciences</td>
<td><a href="mailto:j.marmott@bristol.ac.uk">j.marmott@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. Marvyn Miles</td>
<td>Physics</td>
<td><a href="mailto:m.miles@bristol.ac.uk">m.miles@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. Majid Mirhadi</td>
<td>Department of Computer Science</td>
<td><a href="mailto:M.Mirhadi@bristol.ac.uk">M.Mirhadi@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. Lindsay Nicholson</td>
<td>Cellular and Molecular Medicine / Clinical Sciences</td>
<td><a href="mailto:l.nicholson@bristol.ac.uk">l.nicholson@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. Andy Nolan</td>
<td>Clinical Sciences</td>
<td><a href="mailto:andy.nolan@bristol.ac.uk">andy.nolan@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. Jan Noyes</td>
<td>Experimental Psychology</td>
<td><a href="mailto:Jan.noyes@bristol.ac.uk">Jan.noyes@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Clive Orchard</td>
<td>Dean, Faculty of Medical and Veterinary Sciences</td>
<td><a href="mailto:clive.orchard@bristol.ac.uk">clive.orchard@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Guy Orpen</td>
<td>Pro Vice Chancellor, University of Bristol</td>
<td><a href="mailto:g.orpen@bristol.ac.uk">g.orpen@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>In-Uck Park</td>
<td>Economics</td>
<td><a href="mailto:i.ukpark@bristol.ac.uk">i.ukpark@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. Colombo Peoples</td>
<td>Sociology, Politics and International Studies</td>
<td><a href="mailto:colombo@bristol.ac.uk">colombo@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. Alasdair Prout</td>
<td>Chemistry</td>
<td><a href="mailto:A.Prout@bristol.ac.uk">A.Prout@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Dr. Ralph Pite</td>
<td>English and Institute of Advanced Studies</td>
<td><a href="mailto:ralph.pite@bristol.ac.uk">ralph.pite@bristol.ac.uk</a></td>
</tr>
<tr>
<td></td>
<td>Simon Potter</td>
<td>History</td>
<td><a href="mailto:simon.potter@bristol.ac.uk">simon.potter@bristol.ac.uk</a></td>
</tr>
</tbody>
</table>
### Executive Official
- Dr. Kyosuke Yoshida
  - Executive Vice-President for Research, Kyoto University

### Additional Participants

<table>
<thead>
<tr>
<th>Name / Position</th>
<th>Position</th>
<th>Organisation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mr. Peter Chivers</td>
<td>Director</td>
<td>National Composites Centre</td>
</tr>
<tr>
<td>Mr. Martin Davidson</td>
<td>Chief Executive</td>
<td>British Council</td>
</tr>
<tr>
<td>Ms. Bonnie Dean</td>
<td>Director</td>
<td>Bristol and Bath Science Park</td>
</tr>
<tr>
<td>Mr. Graham Harrison</td>
<td>Director</td>
<td>SetSquared Partnership</td>
</tr>
<tr>
<td>H.E. Mr. Koichi Hayashi</td>
<td>Ambassador of Japan</td>
<td>Embassy of Japan, UK</td>
</tr>
<tr>
<td>Kozo Hiramatsu</td>
<td>Director</td>
<td>JSPS London</td>
</tr>
<tr>
<td>Nakao Ito</td>
<td>Head of Economic Section</td>
<td>Embassy of Japan, UK</td>
</tr>
<tr>
<td>Mr. Dean Jones</td>
<td>EPSRC Lead, Universities Integrator</td>
<td>EPSRC</td>
</tr>
<tr>
<td>Dr. Joanne Newman</td>
<td>Director of International Unit</td>
<td>Universities UK</td>
</tr>
<tr>
<td>Dr. Jane Nicholas</td>
<td>First Secretary</td>
<td>Embassy of Japan, UK</td>
</tr>
<tr>
<td>Tomo Sato</td>
<td>Deputy Director</td>
<td>JSPS London</td>
</tr>
<tr>
<td>Sir David Warren</td>
<td>British Ambassador to Japan</td>
<td>Embassy of Japan, UK</td>
</tr>
<tr>
<td>Ms. Polly Watson</td>
<td>International Programme Coordinator</td>
<td>JSPS London</td>
</tr>
<tr>
<td>The Right Honourable Mr. David Willetts</td>
<td>Minister for Universities and Science</td>
<td>Department of Business, Innovation and Skills</td>
</tr>
</tbody>
</table>