RSC-CSJ-JSPS Symposium on Fundamental Research Advances in Carbon Nanomaterials, 13th June, 2016

On 13th June 2016, a symposium jointly organized by the Royal Society of Chemistry (RSC), the Chemical Society of Japan (CSJ) and the Japan Society for the Promotion of Science (JSPS) London office and also hosted by the RSC was held, with over 100 attendees from institutions all over Japan and the UK. The theme of the event was research advances in carbon nanomaterials and the invited talks explored the latest developments in understanding the chemical properties of these materials and their many potential applications in the fields of energy, electronics, optics and biomedicine.

Opening remarks were given by the Director of JSPS London, Professor Nobuo Ueno, the CEO of RSC Dr Robert Parker and one of the invited speakers from Japan on behalf of the CSJ; Professor Shigeo Maruyama from the University of Tokyo. This was followed by the first session of presentations. The first speaker was Professor Shigeo Maruyama who discussed his research on thermal characterization and solar cell application of carbon nanotubes and graphene. The second speaker, Professor Andrei Khlobystov from the University of Nottingham, presented his latest research on chemical reactions within the smallest carbon nanotube and led a discussion of how nanoscale confinement can lead to new products inaccessible by other synthetic methods discernable through Transmission Electron Microscopy (TEM). The final speaker in this session was Associate Professor Ryo Kitaura from Nagoya University. His talk centered on current work about electronic optical properties and fabrication of two-dimensional materials including carbon nanotubes, nanopeapods, nanowires, graphene and transition metal dichalcogenides. This session was followed by lunch and the poster sessions which included over 40 submissions from institutions across the UK. In the second session the first speaker was Professor Nicole Grobert from Oxford University who discussed about ways to establish growth systematics for the controlled generation of 0D, 1D and 2D nanostructured carbon and non-carbon based materials. The final speaker in this session was Associate Professor Tsuyohiko Fujigaya from Kyushu University. His presentation focused on developments in using a polymer wrapped nanotube for highly durable electrocatalyst support in fuel cells and as a control release of molecules for a drug delivery system. This session was followed by a coffee break and the taking of the group photo below. In the final session the first presentation was given by Professor Alexei Kornyshev from Imperial College London who examined the current understanding of the mechanisms of charge storage and charging dynamics in supercapacitors with ionic liquids as electrolytes. The final presentation of the symposium was given by Professor Yuika Saito from Gakushuin University. She presented her latest research on using tip-enhanced Raman spectroscopy to examine nano-scale materials, specifically carbon nanotubes and graphene. A volley of questions ensued after each presentation, discussing experimental processes and suggestions for development, making the potential for collaboration very clear and exciting.

The symposium closed with poster prize presentations made by Professor Nobuo Ueno and concluding remarks from Dr Robert Parker. Delegates were then invited to join a reception hosted by the Japanese Embassy near- by to celebrate the partnership between CSJ and RSC. During this reception remarks were given by Mr Motohiko Kato, Minister Plenipotentiary of Japan and Professor Nobuo Ueno, followed by a keynote lecture from JSPS Alumnus and member of the RSC, Professsor Tony James. Professor James commented in detail on the successes and future direction of UK-Japan collaboration in the chemical sciences based on his own long experience of joint projects with Japanese researchers. This keynote lecture was followed by toasts from Dr Robert Parker and Professor Shigeo Maruyama and finally attendees were invited to enjoy the rest of the reception and use the time to build on the success of the day's symposium to continue discussions and networking.