
Editorial

Before introducing readers to the papers resulting from the second of the Royal Society of Chemistry's Materials Chemistry Discussions, which form the substance of this issue of the Journal, it seems appropriate to make a few more general remarks about materials chemistry in the first *Journal of Materials Chemistry* issue of the new millennium. The temptation to grandiose generalisation about the past and future 1000 years of the subject can be firmly resisted, if only because one of the glories (and frustrations) of the chemical sciences is that it is as hard to predict the future as it is to rationalise many of the complex phenomena that make up our discipline. Nevertheless, a number of overarching themes can be discussed.

First, the direction of time's arrow is inexorably defined by increasing complexity of molecular structure and assembly, of organisation into macroscopic architecture and thence into increasingly subtle interplay between structure and properties. That is not going to reverse. Second, the properties themselves that we seek to discover and optimise grow ever more subtle: how many chemists thought much about superconductivity till 10 years ago? And third, the techniques that we use to monitor and explain these properties become increasingly powerful. All of that suggests an eventful and exciting future for materials chemistry, of which the first issue of *Journal of Materials Chemistry* in the year 2000 is an excellent illustration.

For many years Faraday Discussions have provided a unique forum for expounding, and then probing through discussion, new ideas and results in fields undergoing rapid development. Papers are submitted well in advance, and circulated to participants before the meeting, which is therefore devoted to discussing them with the authors. The second of what is intended to become a regular series of Materials Discussions takes the same format, including not only the papers submitted, but an extended summary of the discussion. Organic Thin Films exemplify all the characteristics I mentioned earlier: increasing control of the chemistry leading to more complex inter-molecular arrangements through new means of deposition, leading finally to spectacular new properties that feed directly into new technologies. From uni-molecular rectifiers through opto-electronics to chemical sensing, the papers contributed to this opening issue of the third millennium reveal the power and variety of material chemistry. It will not grow less.

Peter Day