The conference is one of a series of meetings organised by the Centre Jacques Cartier and its director, Dr. Alain Bideau in the context of the ''Vingtiémes Entretiens du Centre Jacques Cartier'' which took place in Lyon, France from 1 to 5 December 2007. Our symposium dealt with the general topic of Modelling, Monitoring and Control of Polymer Properties. While this can be thought of as a ''mature'' area of research, it is encouraging to see the interesting and innovative work that is currently being done at the present time; a small cross section of which can be found in the pages of this issue of Macromolecular Symposia. In fact, we hope that you will share our vision that there is an evermore pressing need for accurate process models and robust on-line sensors if we are to produce high quality materials in a responsible manner.

The papers included in this issue cover a very wide range of topics, including: advanced models of polymer properties, on-line monitoring techniques for lab-scale and industrial systems, statistical techniques for enhanced understanding of processes and polymerization kinetics, polymer nanocomposites, and polymer particle morphology just to name a few.

On behalf of the co-organisers of this event, Professor Alex E. Penlidis of the University of Waterloo, Professor Marie-Claude Heuzey of the Ecole Polytechnique de Montréal, and Dr. Timothy McKenna of the LCPP-CNRS and Queen's University, I would like to thank all of those people who made this conference, and in particular we are all grateful to the Centre Jacques Cartier for the opportunity to participate in their series of Entretiens, and for the financial support that helped us to attract 80 engineers and scientists from 16 countries to Lyon. We are also pleased to have had the support of the Ecole Supérieur de Chimie, Physique et Electronique de Lyon who graciously provided the venue for the meeting. We are all additionally grateful to Wiley-VCH for helping us put this cross-section of articles together.

Nida Sheibat-Othman