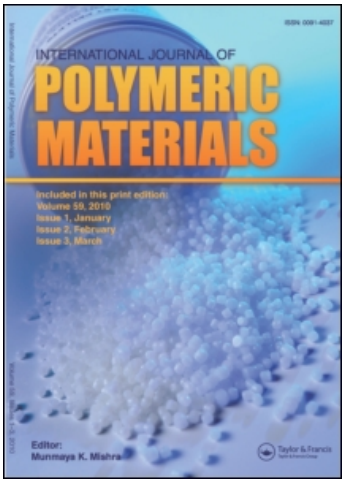

International Journal of Polymeric Materials

Publication details, including instructions for authors and subscription information:
http://www.informaworld.com/smpp/title~content=t713647664

Colloquium on Macromolecular Chemistry

To cite this Article (1991) 'Colloquium on Macromolecular Chemistry', International Journal of Polymeric Materials, 15: 2, 143 — 145
To link to this Article: DOI: 10.1080/00914039108031533
URL: http://dx.doi.org/10.1080/00914039108031533

Colloquium on Macromolecular Chemistry

The Hermann Staudinger Institute for Macromolecular Chemistry at Freiburg University, Germany, initiated the Colloquium on Macromolecular Chemistry held in Freiburg, March 1–3, 1990. About 150 scientists representing fifty scientific and research institutes in Belgium, Canada, Czechoslovakia, France, Germany, Holland, Japan, Switzerland, the U.S.A., the U.S.S.R. and Turkey attended.

Major attention at the Colloquium focused on production of polymer mixtures and liquid crystals and the study of their properties. Results of ESR and NMR (^1H and ^{13}C) studies on the structure of polymers, their mixtures, and compositions were reported by B. Rieger ("BASF", Ludwigshafen, Germany); C. J. W. Chien (Massachusetts University, Boston, U.S.A.); and K. Schmidt-Rohr, J. Clauss, N. Egger, B. Blümich, P. Blümler, E. Günther, J. Dahm, V. Macho, and H. W. Spiess (Max Planck Institute, Mainz, Germany).

Of great interest was a presentation by H.-J. Cantow, S. Kempf, and W. Gronski (Institute of Macromolecular Chemistry, Freiburg) and S. Magonov (Institute of Chemical Physics, Moscow, U.S.S.R.) on new developments in electron-scanning tunnel microscope studies of polymer structure. M. Przybylski (Konstanz, Germany) demonstrated the possibilities of mass-spectrometric analysis of biopolymer and synthetic polymer structure.

A wide range of communications was devoted to synthesis and properties of special rubber and latex. R. Mülhaupt (Institute of Macromolecular Chemistry, Freiburg) discussed polymer materials alloyed by microphase elastomers; H. Finkelmann and R. Löffler (ibid) lectured on synthesis and properties of lyotrope alkyloligoethylene oxide; and N. Ise (Kyoto University, Japan) reviewed polymer latex suspensions and kinetics of crystal growth.

A special meeting on kinetics and mechanisms of polymerization and polycondensation processes included communications by O. Nuyken and K. Losert (Bavarian University, München, Germany); H. Bothe, J.-M. Gosan, and A.-D. Schlüter (Max Planck Institute); and U. Buchholz, M. Schneider, H. Görke, and R. Mülhaupt (Institute of Macromolecular Chemistry). V. Vaskova, V. Juranicova, and J. Barton (Institute of Polymer Studies, Bratislava, Czechoslovakia) spoke on polymerization in reverse emulsion. The mechanism of action of various catalysts—palladium ones in particular—during polycondensation of complex aromatic systems was covered by A.-D. Schlüter, G. Wegner, and M. Rehanhn (Max Planck Institute); V. Percec and E. Cramer (Case Western Research Institute, Cleveland, U.S.A.); and A. Greiner, H. Martelock, and W. Heitz (Philipps University, Marburg, Germany). A. Beck, M. Hanack, A. Hirsch, S. Kamenzin, and P. Vermehren (Institute of Organic Chemistry, Tübingen University, Germany) addressed the mechanism of action of phthalocyaninatometal complexes during oligomerization and polymerization.

Among the communications on production and study of the properties of liquid

crystalline polymers, great interest was generated by the report of R. Oertel, K. Grosskopf, and W.-M. Kulicke (Hamburg University, Germany) dealing with biopolymer liquid crystals. A. M. Ritcey (Laval University, Quebec, Canada), S. Wenz (Max Planck Institute), U. Anbergen and W. Oppermann (Institute of Physical Chemistry, Clausthal, Germany) described the properties of natural polymers: polysacharides, cellulose and its derivatives, as well as the reactions in which these polymers participate, polymeranalogical conversions, in particular. Synthesis and properties of polymer networks were discussed by E. J. Goethals (Institute of Organic Chemistry, Gent University, Belgium), O. Nuyken and J. Dauth (Bavarian University, München), and W. Pekruhn ("Simens", Berlin, Germany).

Theoretical and practical interest were generated by presentations of W. R. Hertler, D. Y. Sogah, and F. P. Boettcher (Scientific and Research Center "DuPont de Nemours", Wilmington, Delaware, U.S.A.) dealing with polymerization on a polymeric support.

A special session was arranged for discussion of applications of polymers, polymer mixtures and compositions in electroengineering, electronics, chromatography, construction, and membrane technology.

A number of lectures dealt with the problems of degradation and stabilization of polymers and their mixtures. New methods of polymer modification by ablation-affected degradation—high-speed flows of heated air—were described by J. Stumpe (Gumbold University, Berlin, Germany); M. Sawodny, F. Embs, G. Wegner, and W. Knoll (Max Planck Institute); under exposure to light and irradiation—U. Gallenkamp, S. Classen, and J. H. Wendorff (German Institute of Polymers, Darmstadt, Germany); under exposure to laser irradiation—D. Cleschinsky, J. Springer, H. Stock, and M. Zinesis (Institute of Technical Chemistry, Technical University, Berlin, Germany); and under the effect of light and plasma—W. Knoll (Max Planck Institute).

Rheological properties of polymers during processing were covered by B. Leikauf, A. Stehle, H.-A. Schneider and W. Regel (Institute of Macromolecular Chemistry). Production of photo-sensitive polymers was discussed by U. Geissler and M. L. Hallensleben (Institute of Macromolecular Chemistry, Hannover University, Germany) and L. Toppare (Middle Eastern Technical University, Ankara, Turkey); polyelectrolite production—Förster (Max Planck Institute); ferroelectric liquid crystal production—F. Kremer, S. U. Vallerien, R. Zentel, and H. Kapitza (Institute of Organic Chemistry, Mainz University, Germany) and H. Kresse (Martin Luther University, Halle, Germany).

O. Mauzac, S. Salier, and R. Schirrer (Polytechnical School, Strassburg, France) delivered a lecture on the physico-chemical parameters of polymers, the effect of stress-strain and rupture on the properties of polymeric materials, polymer networks in particular. H. Reinecke, H. Modler, and H. Finkelmann (Institute of Macromolecular Chemistry) discussed the diffusive properties of polymers, particularly diffusion of low-molecular gaseous compounds through polymeric matrix.

In their report, G. C. Rutledge, W. R. Meyer, F. T. Gentile, and U. W. Suter (Institute of Polymer Studies, Higher Technical School, Zürich, Switzerland)

analyzed the structure of amorphous and crystalline polymers. K. Qvarnström, M. Kunz, and M. Möller (Twente University, Enschede, Holland) and H.-J. Cantow (Institute of Macromolecular Chemistry) treated the structure of glassed polymers.

This Colloquium demonstrated the high scientific level of investigations being conducted, improved hardware and software developments, and showed that studies on polymer properties and their improvement are of great theoretical and practical interest.