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First Polymer Discussions of Dresden in Gaussig: Polymer Blends

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Conference Reports

First Polymer Discussions of Dresden (in Gaussig): Polymer Blends

E. Klemm^a and O. Vogl^b

The First Polymer Discussions of Dresden were organized by the two cochairmen of the meeting, Prof. Werner Berger of the Technical University Dresden and Prof. Manfred Raetzsch, the Director of the Institute of Polymer Technology, with Dr. Dietmar Lohmann as the Secretary; the meeting was sponsored by the Department of Chemistry, Technical University Dresden and the Institute of Polymer Technology, Academy of Sciences of the GDR, Dresden. These First Polymer Discussions of Dresden were held from November 17 to 21, 1986 in the guesthouse of the Technical University Dresden, a beautifully restored baroque mansion in Gaussig. Gaussig is a small town in the Lausitz district about thirty miles east of Dresden, close to the location where three countries: Poland, Czechoslovakia and the German Democratic Republic (GDR) meet.

The meeting was attended by sixty invited scientists from the GDR and abroad. The scientific papers, in preprint form, had been mailed to the participants in advance of the meeting; only highlights of the papers were actually presented during the meeting. This style allowed a considerable amount of time for discussions and the exchange of information. Scientists from nine countries participated in the meeting; in addition to the scientific program, some social activities had also been organized.

On Monday morning, November 17, 1986, the participants were transported from Dresden to Gaussig. On Monday evening the participants met informally at a mixer at the castle, which allowed the participants to become acquainted with each other. On Tuesday evening, a rustic dinner party was arranged with a special local flavor. The dinner was followed by a fashion show presented by members of the Synthetic Fiber Companies of Guben, Schwarza and Premnitz. On Wednesday afternoon an excursion was organized to visit the ancient city of Bautzen. Bautzen, a walled town, founded one thousand years ago, still strong with medieval flavor, and now almost completely restored, is located about ten miles from Gaussig. There was also a visit to the town of Kleinwelka, with its interesting churches. The last evening, a violin concert was held in the mirror room of the castle of Gaussig. At the end of the meeting, on Friday, November 21, 1986 when the participants gathered to return home, it was concluded that this was a very unusual and productive meeting; we were told that the polymer scientists in Dresden



E. Klemm



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Dresden: On the Elbe River

are planning to hold another meeting, the Second Polymer Discussions of Dresden, in two years on a different subject of polymer science.

During the conference in Gaussig, twenty-eight invited papers were presented in addition to fifteen posters. The meeting was opened by Professor Berger, the cochairman of the meeting; he welcomed the participants on behalf of the polymer community and also on behalf of the Technical University which provided the meeting place. The mansion of Gaussig is now part of the Technical University Dresden.

The first paper presented at the meeting by M. Raetzsch and his coworkers was entitled "Blends of Reactive Polymer." B. Pukansky of the Central Institute of Chemistry of

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Gaussig, Meeting Place



City of Bautzen

the Hungarian Academy of Sciences in Budapest, Hungary discussed the work of Prof. F. Tudos' group entitled "Effects of Components on the Tensile Properties of Multicomponent Polymer Blends—Current Theories and Practice." "Phase Behavior of Polymer Blends" was discussed by H. W. Kammer of the Technical University of Dresden G.D.R. "The Influence of Tensides on the Miscibility of Polymers" was discussed by Z. Funke of the Technical University of Leuna-Merseburg G.D.R. The "Crosslinking of Polypropylene and Polyethylene Blends" was presented by E. Borsig of the polymer modification group at the Institute of Polymer Chemistry in Bratislava, Czechoslovakia. Attempts to prepare block and triblock polymers by radical polymerization mechanisms; "Macrolinitiators: Synthesis, Decomposition and Activity in Polymerization Reactions" was discussed by S. Hoering of the group of Professor J. Ulbricht of the Technical University of Leuna-Merseburg, G.D.R.

The lectures started Tuesday morning with a paper by M. Michailov of the Institute of Organic Chemistry of the Academy of Sciences in Sofia, Bulgaria. He discussed the "Preparation, Structure and Properties of Selected Binary Polymer Systems." "Polymer Blends from Head to Head Polymers and Other Unusual Polymer Structures" was presented by O. Vogl of the Polytechnic University, Brooklyn, NY. The "Correlation Between Miscibility and Adhesion Properties of Polymers" was discussed by J. Piglowski of the Technical University of Wrocław, Poland. An industrial contribution by P. Fiedler of the Leuna, G.D.R., related the "Structure Property Relationship with Their Applicability for Polyethylene Blends."

"Structure Formation and Characterization of the Crystalline Structures in Polyethylene Blends of High and Low Density (HDPE and LDPE) was the subject of a discussion by H. J. Radusch of the Technical University of Leuna-Merseburg and the Buna Chemical Company, G.D.R. The basic principals of "Miscibility in Copolymer Blends" was elegantly elaborated by F. E. Karasz of the University of Massachusetts, Amherst, MA. "Toughened Plastics and Toughening Mechanism in Polymer Blends Consisting of Ductile and Brittle Polymers" was presented by T. Inoue of the Tokyo Institute of Technology, Tokyo, Japan. The "Interpenetration-Polymerization for the Preparation of

Polymer Mixtures" was discussed by E. Klemm of the University of Jena, G.D.R. This type of polymerization has also been called in the past sequential polymerization.

From H. G. Zachmann of the University of Hamburg, the Federal Republic of Germany was the contribution of "Crystallization of Blends of Polypropylene and Arkon P." The "Study of the Influence of Tacticity of PMMA on Phase Structure, Miscibility and Superstructure in Poly(ethylene oxide)/Poly(methyl methacrylate) Blends" was discussed by E. Martuscelli of the Polymer Institute in Naples, Italy. "Progress in the Electromicroscopic Determination of the Morphology and the Mechanical Microprocesses in Polymer Combinations" was presented by G. H. Michler of the Buna Chemical Company, Schkopau G.D.R. G. Heublein of the University Jena G.D.R., presented his work on "Reaction Composites from Polyfunctional Macromolecules and Inorganic Solids."

On Thursday morning, M. Kryszewski of the Centre of Molecular and Macromolecular Studies, Polish Academy of Sciences, Lodz, Poland presented the work of his group on "Structure Formation by Self-organization and Crystallization and Its Influence on the Electrical Properties of Heterogeneous Polymeric Systems." "Electrically Conducting Polymer Blends, a Way for Fabricable Conducting Polymer Materials?" was discussed by L. Wuckel of the Central Institute of Solid State Physics and Materials Research, Dresden, G.D.R.

Z. Jedlinski of the Institute of Polymer Chemistry, Polish Academy of Science, Zabrze, Poland discussed his work on "Liquid Crystalline Polycondensation Polymers." T. Kelen of the Kossuth Lajos University, Debrecen, Hungary discussed "Distribution of Elastomers in Filled Polyolefin Composites." The "Influence of Chemical Structures on the Liquid Crystalline Behavior of Polysiloxanes with Mesogenic Sidegroups" was presented by B. Kruecke of the University of Halle, G.D.R. "Silicon Containing Polymer Blends" was also the subject of K. Ruhlmann's talk; the contribution was from the Technical University Dresden G.D.R. The "Possibility of Organic Silicon Chemistry for the Preparation of Block-copolymers, Interpenetrating Polymer Networks and Blends" was presented by H. Hamann of the Nunchritz Chemical Works, Radebuel G.D.R.



Meetings' Participants

"RIM and RRIM Polyurethanes" was the subject of a discussion by P. Herrman of Synthesis Works Schwarzheide in Schwarzheide, G.D.R. "Reinforced Silicon Gels an Interesting Group of Polymer-Polymer Blends in the Area of Silicon Rubbers" was discussed by H. Schickmann of Nuenchritz G.D.R. The "Reduction of Shrinkage in Poly(butylene terephthalate) Filled with Inorganic Fillers by the Addition of Poly(ethylene terephthalate)" was presented by J. Gaehde from the Central Institute of Organic Chemistry, Division Macromolecular Compounds, Academy of Sciences, Berlin. Finally, "Cold Drawing of (Poly(ethylene terephthalate/polyethylene Films was discussed by W. Berger, L. L. Ludwig and W. Hauße of the Technical University Dresden G.D.R., and F. E. Karasz of the University of Massachusetts, Amherst. As mentioned earlier, in addition fifteen papers were presented in poster form.

It was concluded that the First Polymer Discussions of Dresden were very successful and most participants hope to meet again in two years in Dresden, or the surroundings of Dresden.