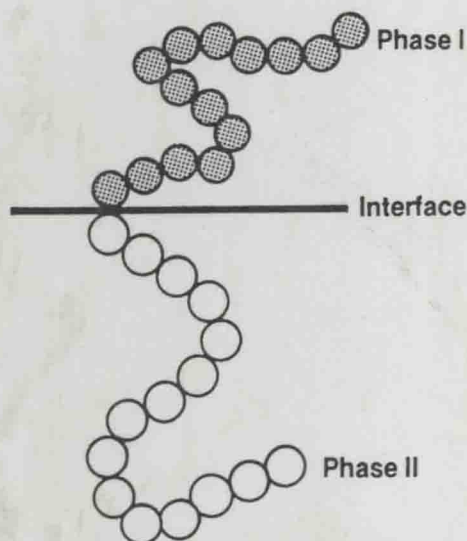


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# POLYMER BLENDS AND ALLOYS



edited by

**GABRIEL O. SHONAIKE**  
**GEORGE P. SIMON**

# POLYMER BLENDS AND ALLOYS

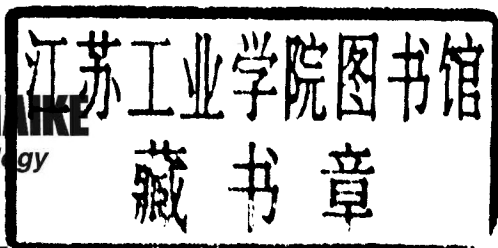
edited by

**GABRIEL O. SHONAIKE**

*Himeji Institute of Technology  
Himeji, Hyogo, Japan*

**GEORGE P. SIMON**

*Monash University  
Clayton, Victoria, Australia*



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To our wives and children:

Dayo, Lola, Toyin, Maryrose, and Vincent



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## Preface

Polymer blends are a key component of current polymer research and technology. This is fed in part by the ease of production of new materials by mixing and the diversity of properties that result. From a scientific standpoint, however, an increasing battery of characterization techniques have also led to an increased understanding of the ways polymers mix, their fundamental interactions, and how these interactions affect their final properties. This link between molecular interactions and physical and engineering properties continues to fascinate because of the scientific insights it produces, and because it recognizes that, in a world of increasingly tight economic circumstances, some outcomes of research are achieved by careful design while others are the result of serendipity.

Because polymer research remains a growing field, we decided to assemble these chapters on polymer blends from laboratories around the world. In this way, many aspects of polymer blends research are represented.

The book is divided into four parts: Compatibilization and Miscibility; Characterization; Morphology; and Recent Developments (although, of course, recent developments are included in all of the parts). The range of topics covered includes synthesis, mechanical properties, computer simulations, new techniques of characterization, reactive blending, and toughening mechanisms, among others. The contributors have made an effort to explain their respective topics to aid readers in “crossing over” from their current areas of expertise into others that may be useful to them.

We hope that this comprehensive book will be a useful reference for academic researchers as well as engineers in polymer and related industries.

*Gabriel O. Shonaike*  
*George P. Simon*

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## Contributors

**Stuart R. Andrews, Ph.D.** Department of Chemistry, University of Swansea, Singleton Park, Swansea, Wales

**Valeria Arrighi, Ph.D.** Department of Chemistry, Heriot-Watt University, Riccarton, Edinburgh, Scotland

**Philippe Béguelin, Ph.D.** Research Associate, Materials Department, Polymer Laboratory, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland

**Witold Brostow, D.Sc., F.R.S.C.** Professor, Department of Materials Science, University of North Texas, Denton, Texas

**Chi-Ming Chan, Ph.D.** Professor, Department of Chemical Engineering, and Director, Advanced Engineering Materials Facility, The Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong

**Chao-Hsun Chen, Ph.D.** Professor, Department of Applied Mechanics, Institute of Applied Mechanics, National Taiwan University, Taipei, Taiwan, Republic of China

**Wen-Yen Chiang, Ph.D.** Professor, Department of Chemical Engineering, Tatung Institute of Technology, Taipei, Taiwan, Republic of China

**John M. G. Cowie, B.Sc., Ph.D., D.Sc., C.Chem., F.R.S.C., F.R.S.E.** Professor, Department of Chemistry, Heriot-Watt University, Riccarton, Edinburgh, Scotland

**Rudolph D. Deanin, A.B., M.S., Ph.D.** Professor, Department of Plastics Engineering, University of Massachusetts—Lowell, Lowell, Massachusetts

**Thomas S. Ellis, B.Sc., Ph.D.\*** Staff Research Scientist, Polymers Department, General Motors Research and Development Center, Warren, Michigan

**Andy A. Goodwin, B.Sc., Ph.D.†** Senior Lecturer, Department of Materials Engineering, Monash University, Clayton, Victoria, Australia

**Roberto Greco, Dr.** Senior Scientist, Institute of Research and Technology of Plastic Materials, National Research Council of Italy, Arco Felice, Naples, Italy

**Qipeng Guo** Professor, Department of Polymer Science and Engineering, University of Science and Technology of China, Hefei, People's Republic of China

**Kuo-Huang Hsieh, Ph.D.** Professor, Department of Chemical Engineering, National Taiwan University, Taipei, Taiwan, Republic of China

**Tsung-Tang Hsieh, M.Sc.** Department of Chemical Engineering, Monash University, Clayton, Victoria, Australia

**Chi-Yuan Huang, Ph.D.** Associate Professor, Department of Materials Engineering, Tatung Institute of Technology, Taipei, Taiwan, Republic of China

**Takashi Inoue, Dr.Eng.** Professor, Department of Organic and Polymeric Materials, Tokyo Institute of Technology, Tokyo, Japan

**Umaru Semo Ishiaku, B.Ed., M.Sc., Ph.D.** Polymer Technology Section, School of Industrial Technology, Universiti Sains Malaysia, Penang, Malaysia

**Hanafi Ismail, Ph.D.** Polymer Technology Section, School of Industrial Technology, Universiti Sains Malaysia, Penang, Malaysia

---

*Current affiliations:*

\* Delphi Automotive Systems Research and Development Center, Warren, Michigan.

† Boral Plasterboard, Port Melbourne, Victoria, Australia.

**H. H. Kausch, Ph.D.** Professor, Polymer Laboratory, Federal Institute of Technology, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland

**H. Kihara, Dr.Eng.** Petrochemical Research Laboratory, Sumitomo Chemical Company Ltd., Sodegaura-shi, Chiba, Japan

**József Karger-Kocsis, Ph.D., D.Sc.** Professor, Institute for Composite Materials Ltd., University of Kaiserslautern, Kaiserslautern, Germany

**Yiu-Wing Mai, Ph.D.** Professor, Centre for Advanced Materials Technology (CAMT), Department of Mechanical and Mechatronic Engineering, University of Sydney, Sydney, New South Wales, Australia

**Margaret A. Manion, B.S., M.L.S.** Librarian, Lydon Library, University of Massachusetts—Lowell, Lowell, Massachusetts

**Takaaki Matsuoka, Dr.Eng.** Principal Researcher and Manager, Computational Materials Engineering Laboratory, Toyota Central Research and Development Laboratories, Inc., Nagakute, Aichi, Japan

**S. Mitsui, M.Eng.** Petrochemical Research Laboratory, Sumitomo Chemical Company Ltd., Sodegaura-shi, Chiba, Japan

**H. Miyagi, M.Eng.** Petrochemical Research Laboratory, Sumitomo Chemical Company Ltd., Sodegaura-shi, Chiba, Japan

**Zainal Arifin Mohd Ishak, Ph.D.** Associate Professor, Polymer Technology Section, School of Industrial Technology, Universiti Sains Malaysia, Penang, Malaysia

**René Muller, Ph.D.** Professor, Polymeric Materials and Processes Laboratory, European Engineering School for Chemistry, Polymers and Materials (ECPM), Strasbourg, France

**Y. Okamoto, Dr.Eng.** Manager, Petrochemical Research Laboratory, Sumitomo Chemical Company Ltd., Sodegaura-shi, Chiba, Japan

**Toshiaki Ougizawa, Dr.Eng.** Associate Professor, Department of Organic and Polymeric Materials, Tokyo Institute of Technology, Tokyo, Japan

**Christopher J. G. Plummer, Ph.D.** Research Associate, Materials Department, École Polytechnique Fédérale de Lausanne, Lausanne, Switzerland

**H. J. Din Rozman, B.App.Sc., M.Sc., Ph.D.** Lecturer, School of Industrial Technology, Universiti Sains Malaysia, Penang, Malaysia

**Gabriel O. Shonaike, M.Sc., Ph.D.** Associate Professor, Department of Chemical Engineering, Himeji Institute of Technology, Himeji, Hyogo, Japan

**George P. Simon, Ph.D.** Reader, Department of Materials Engineering, Monash University, Clayton, Victoria, Australia

**Ph. Teyssié, Ph.D.** Professor Emeritus, Center for Educational and Research on Macromolecules (CERM), University of Liège, Sart-Tilman, Liège, Belgium

**Carlos Tiu, Ph.D.** Reader, Department of Chemical Engineering, Monash University, Clayton, Victoria, Australia

**Yasuhisa Tsukahara, Dr.Eng.** Associate Professor, Department of Chemistry and Materials Technology, School of Engineering and Design, Kyoto Institute of Technology, Kyoto, Japan

**Wan Rosli Wan Daud, B.Sc., M.Sc., Ph.D.** Associate Professor, School of Industrial Technology, Universiti Sains Malaysia, Penang, Malaysia

**Martin Weber, Ph.D.** Senior Scientist, Polymer Research Laboratory, BASF AG, Ludwigshafen, Germany

**Graham Williams, Ph.D.** Professor, Department of Chemistry, University of Swansea, Singleton Park, Swansea, Wales

**Barbara A. Wood, Ph.D.** Research Associate, Central Research and Development, DuPont Co., Wilmington, Delaware

**Jingshen Wu, Ph.D.** Assistant Professor, Department of Mechanical Engineering, The Hong Kong University of Science and Technology, Clear Water Bay, Kowloon, Hong Kong

**Marcus D. Zipper, Ph.D.\*** Research Fellow, Department of Materials Engineering, Cooperative Research Centre for Polymers, Monash University, Clayton, Victoria, Australia

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\* *Current affiliation:* Product Development Engineer and Senior Chemist, Hunstman Chemical Company Australia Pty Ltd., West Footscray, Victoria, Australia.

# **POLYMER BLENDS AND ALLOYS**

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# Contents

<i>Preface</i>	v
<i>Contributors</i>	xi

## PART I COMPATIBILIZATION AND MISCIBILITY

<b>1. Compatibilization of Polymer Blends</b>	<b>1</b>
<i>Rudolph D. Deanin and Margaret A. Manion</i>	
<b>2. Compounding and Compatibilization of High-Performance Polymer Alloys and Blends</b>	<b>23</b>
<i>Wen-Yen Chiang and Chi-Yuan Huang</i>	
<b>3. Miscibility and Interfacial Behavior in Polymer-Polymer Mixtures</b>	<b>53</b>
<i>Toshiaki Ougizawa and Takashi Inoue</i>	
<b>4. Miscibility and Relaxation Processes in Blends</b>	<b>81</b>
<i>John M. G. Cowie and Valeria Arrighi</i>	
<b>5. Thermoplastic Rubbers via Dynamic Vulcanization</b>	<b>125</b>
<i>József Karger-Kocsis</i>	



- |  |            |
|--|------------|
| <b>6. Thermosetting Polymer Blends: Miscibility, Crystallization, and Related Properties</b> | <b>155</b> |
| <i>Qipeng Guo</i>  |            |
| <b>7. Computer Simulation of Spinodal Decomposition in Polymer Mixtures</b>                  | <b>189</b> |
| <i>Takaaki Matsuoka</i>  |            |
| <b>8. Interactions and Phase Behavior of Polyester Blends</b>                                | <b>209</b> |
| <i>Thomas S. Ellis</i>   |            |
| <b>9. Miscibility of Nylon 66/Santoprene Blends</b>  | <b>235</b> |
| <i>Gabriel O. Shonaike</i>   |            |

## PART II CHARACTERIZATION

- |   |            |
|---|------------|
| <b>10. High-Performance Polymer Blends and Alloys: Structure and Properties</b>   | <b>263</b> |
| <i>Martin Weber</i>   |            |
| <b>11. "Natural" Polymer Alloys: PC/ABS Systems</b>   | <b>289</b> |
| <i>Roberto Greco</i>  |            |
| <b>12. Properties of Thermotropic Liquid Crystalline Polymer Blends</b>   | <b>331</b> |
| <i>Tsung-Tang Hsieh, Carlos Tiu, George P. Simon, Stuart R. Andrews, Graham Williams, Kuo-Huang Hsieh, and Chao-Hsun Chen</i>         |            |
| <b>13. Polymer Liquid Crystals in High-Performance Blends</b>   | <b>365</b> |
| <i>Witold Brostow</i>   |            |
| <b>14. Structure-Property Relationships in Poly(aryl Ether Ketone) Blends</b>   | <b>381</b> |
| <i>Andy A. Goodwin, George P. Simon, and Marcus D. Zipper</i>   |            |
| <b>15. Applications of X-Ray Photoelectron Spectroscopy and Secondary Ion Mass Spectrometry in Characterization of Polymer Blends</b> | <b>415</b> |
| <i>Chi-Ming Chan, Jingshen Wu, and Yiu-Wing Mai</i>   |            |
| <b>16. Emulsion Models in Polymer Blend Rheology</b>  | <b>451</b> |
| <i>René Muller</i>  |            |

## PART III MORPHOLOGY

- |  |            |
|--|------------|
| <b>17. Microstructure of Multiphase Blends of Thermoplastics</b> | <b>475</b> |
| <i>Barbara A. Wood</i>   |            |