Dr. Younjin Min Joins DPE

The newest member of our Polymer Engineering family is Assistant Professor Dr. Younjin Min, who joined the department in December 2012. Growing up in Seoul, South Korea, Min was a very inquisitive and adventurous child who enjoyed mysteries and imagining herself as a detective à la Sherlock Holmes. Because her father was a high school teacher, she also liked playing school with her childhood friends (and she played the teacher, of course!). Her curiosity led to an early interest in science that was fueled by simple science experiments she conducted at home, much to the annoyance of her mother.

It was this quest for answers that led Min to pursue a Bachelor of Science in environmental science and engineering at Ewha Womans University in Seoul. After receiving her degree with honors in 2000, she went on to attend the Korea Advanced Institute of Science and Technology (KAIST) where she developed novel biocompatible diblock copolymers for nano-sized drug delivery carriers. After graduating with her Master of Science in chemical and biomolecular engineering in 2003, Min worked for a year in the biomedical center at the Korea Institute of Science and Technology (KIST) in the area of formulating protein drug carriers for tissue regeneration.

Desiring to be challenged even further, in 2004 Min relocated to sunny California to study in the Department of Chemical Engineering at the University of California, Santa Barbara, under the supervision of Dr. Jacob N. Israelachvili and Dr. Joseph A. Zasadzinski. Her research there focused on soft-condensed matter from biological (lipid membranes, proteins) to non-biological (polymers, nanoparticles, surfactants) and interfacial surface science. A recipient of both the Korea Science and Engineering Foundation (KOSEF) Scholarship and the Schlinger Scholarship for Excellence in Chemical Engineering Research, Min received her doctorate in 2009 with a dissertation on “Investigation of Static and Dynamic Forces Between Soft-condensed Matter: From Lipid Bilayers to Surfactant-coated Nanoparticles.”

In order to gain more practical research application experience, in 2010 Min accepted a post-doctoral position at Massachusetts Institute of Technology (MIT) to work with Dr. Paula T. Hammond in developing biomimetic polymeric materials for layer-by-layer assembling systems for wound healing and vaccination. Two years later, recognizing the prominence of The University of Akron in polymer research and the opportunities for collaboration, Min decided to make the move to UA.

An active researcher, Min has published over 21 publications in high-impact journals, including Nature Materials, Nano Letters, and Proceedings of the National Academy of Sciences. She also holds two patents on novel biocompatible polymers.

Since her recent move to The University of Akron, Min has hit the ground running in quickly establishing her lab and research group. Her current research focuses on the fundamental understanding of nano- and bio-materials at the molecular level in order to utilize such knowledge for practical applications.

While she maintains a busy work and research schedule, Min still finds time to enjoy a good mystery and to put her sleuthing skills to the test, only this time in search of antiques and other treasures. A warm, enthusiastic and outgoing individual, the department is very happy to welcome Dr. Younjin Min on board.
» Message from the Chair

Summers on a college campus are always peaceful and relaxing. I took a walk today at noon and the campus was quiet and relatively empty. And, of course, it was a bright, sunny and warm day – typical Akron weather. (At least one can hope.) When I returned to the department, however, it was a beehive of activity. Literally, over a hundred graduate students hard at work, looking to discover the “next big thing”. While the walk was tranquil, the hustle and bustle was invigorating, the enthusiasm was contagious, and the atmosphere was welcoming. This is what a college professor lives for.

DPE is thriving and things are changing. Our graduate program continues to expand with the addition of more 3+2 students from China and an increase in our faculty and their research efforts. We have outgrown the Polymer Engineering Academic Center (PEAC) and Olson Research Center. Drs. Miko Cakmak and Alamgir Karim have moved their laboratories to the National Polymer Innovation Center (NPIC), which is a relatively new building (2011) next to PEAC. Dr. Xiong Gong has moved part of his lab to NPIC as well. Despite sequestration, a number of our faculty have current NSF grants and many of them have also been very busy with service to national technical societies. After 25 years, I finally stepped down as Editor of Polymer Engineering and Science, but the journal maintains a presence in DPE with Dr. Sadhan Jana serving as Associate Editor.

The Department hosted two major lecture events this year. The first was supported by a grant from Saudi Basic Industries Corporation (SABIC), which provides funding for an annual SABIC Lectureship. This supports a visit to UA and two topical lectures by an eminent leader in the field of polymer engineering. This year’s event on April 25-26, 2013, included two seminars by Prof. Han E. H. Meijer from Eindhoven University of Technology, The Netherlands. The second lecture series, the Bayer Lectureship, featured Prof. Alan Heeger, recipient of the 2000 Nobel Prize in Chemistry, who also presented two seminars. This year, the Bayer Lectureship was held in conjunction with the College’s 25th Anniversary Celebration on May 9-10, 2013. More information on these two lectureships may be found elsewhere in this newsletter.

I hope each of you has had and continues to have a successful and healthy year. We look forward to hearing from you and seeing you at Akron in the future.

» Mark Your Calendar

2013
- Sept. 8-12, American Chemical Society (ACS) Fall National Meeting, Indianapolis, Ind.
- Oct. 24-26, Society of Women Engineers (SWE) Annual Conference, Baltimore, Md.
- Oct. 30-Nov. 3, Society of Hispanic Professional Engineers (SHPE) Annual Conference, Indianapolis, Ind.
- Nov. 3-8, American Institute of Chemical Engineers (AIChE) Annual Meeting, San Francisco, Calif.
- Nov. 15-21, American Society of Mechanical Engineers (ASME) International Mechanical Engineering Congress & Exposition, San Diego, Calif.

2014
- Mar. 3-7, American Physical Society (APS) March Meeting, Denver, Colo.
- Mar. 16-20, American Chemical Society (ACS) Spring National Meeting, Dallas, Texas
- Mar. 26-30, National Society of Black Engineers (NSBE) Annual Convention, Nashville, Tenn.
- April 28-30, Society of Plastics Engineers (SPE) Annual Technical Meeting (ANTEC), Las Vegas, Nev.

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» Wearing traditional wedding clothes of ancient China, Dr. Jinkun Hao stands next to her husband, Peng Gao.

Dr. Jinkun Hao
Married Peng Gao on Dec. 30, 2012, in Weifang, China. Formerly a post-doc with Dr. Robert Weiss, she is now a Senior Scientist with Avery Dennison in Shanghai, China.

» Dr. Bob Weiss

Married Peng Gao on Dec. 30, 2012, in Weifang, China. Formerly a post-doc with Dr. Robert Weiss, she is now a Senior Scientist with Avery Dennison in Shanghai, China.
The Department of Polymer Engineering had the good fortune to host Dr. Alan J. Heeger, Nobel Laureate in Chemistry (2000) and Professor of Physics, Material Science and Chemistry at the University of California, Santa Barbara, for the 2013 Bayer Lectureship. Over 400 attendees from local high schools, industrial companies, and academic institutions, listened to the lectures in the Student Union Theater at The University of Akron on May 9 and 10, 2013. From the perspectives of attitude towards science and current research interests, Heeger delivered two Bayer Lectures – “Creativity, Discovery and Risk: Nobel Prizes Past and Future” and “The Role of the Heisenberg Uncertainty Principle in Bulk Heterojunction Solar Cells”.

Professor Heeger engaged his audience by discussing his own experience in research and in-depth understanding of “plastic” solar cells during the two-day lecture series. Students found Heeger’s first lecture was as much a sharing of wisdom by an elder statesman as it was a scientific lecture by a brilliant scientist. Starting from childhood memory, Heeger shared his understanding of science, research, success, and life. For his second lecture, he presented a general picture of “plastic” solar cells to the attentive audience. Current research interests, recent achievements and future perspectives were introduced and discussed. Furthermore, he proposed a new theory to explain the charge excitation-diffusion-separation process, which is essential in the study of solar cells.

At the conclusion of the successful 2013 Bayer Lectureship, Heeger was honored with an award plaque of grateful appreciation from representatives of the Department of Polymer Engineering and sponsor, Bayer MaterialScience.
A L U M N I

Dr. Kyun Ha Ban (Ph.D. 2008)
Is now Principal Research Engineer in the Automotive Material Development Group of Samsung Cheil Industries in Uiwang-si, South Korea.

Dr. Diya Bandyopadhyay (Ph.D. 2012)
Along with co-authors, Gurpreet Singh and Dr. Alamgir Karim, as well as Dr. Matthew L. Becker of the Department of Polymer Science, published “Capillary Wave Confinement-induced Stabilization of Polymer Films.” ACS Applied Materials & Interfaces 5 (10), April 12, 2013 (Web): 4006-4010. Bandyopadhyay was recently promoted to Project Manager at BASF in Wyandotte, Mich.

Dr. Santosh Bawiskar (M.S. 1992 / Ph.D. 1997)
Completed an M.B.A. at Clarion University of Pennsylvania in 2012. Bawiskar is Lead R&D Manager with Dow Elastomers in Freeport, Texas.

Dr. Rafael Benavides Gonzalez (Ph.D. 2013)
Accepted a position as Senior Engineer with Dow Chemical Company in Freeport, Texas.

Dr. Feina Cao (Ph.D. 2008)
Along with husband, Lusu Guo, welcomed the birth of their daughter, Miah Guo, on Jan. 21, 2013. The family currently resides in Canton, Mich.

Dr. Jaesun Choi (Ph.D. 2013)
Accepted a position as Scientist with Cabot Corporation in Billerica, Mass.

Dr. Taner Dirama (M.S. 2002 / Ph.D. Polymer Science, 2005)
Is now Director of Research and Technology with Northstar Innovation, Yildiz Holding, in Istanbul, Turkey.

Dr. Jamie Dziczkowski (Ph.D. 2008)
Along with husband, Jeremy, welcomed the birth of their second child, daughter Jillian Faith, on Dec. 15, 2012. Dziczkowski is a Chemist Associate with Reichhold in Research Triangle Park, N.C.

Dr. Fatemesadat Emami (Ph.D. 2013)
Accepted a post-doc position in the Non-Equilibrium Research Center (NERC) at Northwestern University in Evanston, Ill.

Dr. I. Sedat Gunes (Ph.D. 2009)
Is now Associate Editor for the Journal of Plastic Film & Sheeting.

Dr. Zehra Kalkan (Ph.D. 2006)
Promoted to Senior Principal Engineer, Medical Products R&D, Materials Platform Development, at Baxter Healthcare Corporation in Round Lake, Ill.

Daniel Festa (M.S. 1993)
Daniel and wife, Debbie, welcomed the birth of their fifth child, daughter Danica Justine, on May 24, 2013. She joins four older brothers in the family. Festa is Manager of Innovation and Design at ShurTech Brands in Avon, Ohio.

Mahmoud Ghanem
Mahmoud Ghanem (M.S. 2004)
Is now Marketing and Sales Manager with Sadara Chemical Company in Dhahran, Saudi Arabia.

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Dr. Rishi Kumar (Ph.D. 2010)
Received DuPont’s Highest Ethical Behavior Award medal for the Asia-Pacific region. As an Ethics Champion, Kumar was recognized for his high level of ethics and service to the company. He is a Research Scientist with DuPont in Hyderabad, India.

» Jamie and Jeremy Dziczkowski with daughter Jillian, son Joshua, and family dog “Hallie.”
Dr. Elliot (Byung-Hwa) Lee (Ph.D. 2001)
Is now Advanced Engineer for Compound Development at General Cable in Indianapolis, Ind.

Dr. Tzu-Jen Lin (Ph.D. 2013)
Accepted a post-doc position in the Department of Chemical Engineering, National Taiwan University, in Taipei City.

Mark Mackura (M.S. 2013)
Accepted a position as Films Process Quality Engineer with Avery Dennison in Concord, Ohio.

Mario Maffei (M.S. 2006)
Is now a Lab Technician with Arizona Chemical in Dover, Ohio.

Dr. Rushikesh Matkar (Ph.D. 2007)
Promoted to Senior Process Engineer, Technology Development Program Management, Ultrapure Water Division, at Intel Corporation in Hillsboro, Ore.

Dr. Ratan Mishra (Ph.D. 2012)

Phani Nagaraj (M.S. 2003)
Promoted to Technology Manager for North and Latin Americas at Chemtura in Middlebury, Conn.

Kiran Narayan (M.S. 1998)
Is now Head, Global Supply Chain for Opto Circuits India, Ltd., in Bengaluru, India.

Dr. Setareh Niknezhad (Ph.D. 2013)
Is now Senior Research Engineer with the 3M Company, Industrial Adhesives and Tapes Division, in Minneapolis, Minn.


Dr. Domasius Nwabunma

Dr. Domasius Nwabunma (M.S. 1996 / Ph.D. 1999)
Accepted a new position as Non-Metallic Materials Specialist with Saudi Arabian Oil Company in Dhahran, Saudi Arabia.

Jatin Panchal (M.S. 1999 / M.B.A. Case Western Reserve University, 2011)
Is now Application Development Manager with Steer America in Uniontown, Ohio.

Sachin Shah (M.S. 1992)
Is now Vice President for Commercial Management and Strategic Sourcing at Packaging Dynamics in Chicago, Ill.

Fred Shockey (M.S. 1996)
Is chairing the Global SPE Rotational Molding Product Design Competition for the Spring 2014 Rotational Molding TopCon. He also serves as Membership Chairman of SPE’s Rotational Molding Division. Shockey is Chairman and CEO of Winsell, Inc., in Akron, Ohio.
Samar Teli (M.S. 2002)
Is now Technical Service Manager with Samsung Chemical (USA) in Detroit, Mich.

Harrison (Liqun) Yu (M.S. 2000)
His novel method to process bioplastics with long relaxation times during and after processing has been selected as a finalist by the SPI Bioplastics Council for its first annual Innovation in Bioplastics Award. Yu is CEO of Bondable Polymers in Midlothian, Va.

Faculty

Dr. Miko Cakmak
April 2013 – Received a no-cost extension from Lockheed Martin for “Nano-reinforced Low Permeability Polymer Films and Matrices.” Cakmak has received a total of $223,945.

April 2013 – Received a no-cost extension from NASA Shared Services for “Flexible Aerogel Film Manufacturing.” Cakmak has received a total of $120,000 to date.

March 2013 – Received additional funding of $60,000 from NASA Glenn Research Center for “Flexible Aerogel Film Manufacturing.” This brings Cakmak’s total award to $100,000.

Dr. Kevin Cavicchi

Dr. Xiong Gong

Dr. Xiong Gong
May 2013 – Awarded $600,000 from Bringspring Science and Technology Company in China for “High Performance Inverted Polymer Solar Cells.”

May 2013 – Since January 2013, has had eight papers accepted and published in journals such as Advanced Materials, Journal of Physical Chemistry, Advanced Engineering Materials, and Organic Electronics.

February 2013 – Received $11,658 from System Seals for a Community Industrial Assistanship for doctoral student, Xilan Liu.

Perry (Parimal) Vadhar (M.S. 1985)
Elected as Councilor for the Thermoplastic Materials and Foams Division of the Society of Plastics Engineers. Vadhar just completed a two-year term in June as Chair of the division. He is a Research Scientist in the New Business Development Group – Technology and Innovation at Sealed Air Corporation in Duncan, S.C.

Students Win Video Award

Senlong Gu and Jinwei Cao won second place for their video, “Amazing Polymer!” in the 2012 SPI Student Video Competition. The judges, plastics industry professionals who serve on SPI’s Communications & Marketing Advisory Committee, found the video to be engaging and well-executed for this year’s theme, Plastics Mean Innovation. For their efforts, the students were awarded $1,500 plus a $3,000 prize for the polymer engineering program. Gu is a doctoral student studying with Dr. Sadhan Jana and Cao is a master’s student with Dr. Thein Kyu. The video may be viewed at: http://www.youtube.com/watch?v=fgos31GKhxs

Perry Vadhar

Senlong Gu and Jinwei Cao
Dr. Hendrik Heinz
May 13, 2013 – Along with PI, Dr. Matthew Espe, and Co-PI, Dr. David Modarelli, both from UA’s Department of Chemistry, received a no-cost extension from the Centro de Investigación en Materiales Avanzados for “Organic and Hybrid Organic Solid-State Photovoltaic Materials and Devices.” The total award to date is $187,500.

May 2013 – Received additional funding of $83,000 from the National Science Foundation for “CAREER: Unraveling Molecular Mechanisms of Biomineralization.” This brings Heinz’s total award to $347,000.


Dr. Avraam Isayev

Dr. Sadhan Jana
May 2013 – Received additional funding of $3,356 from Lubrizol Advanced Materials for a Community Industrial Assistantship for doctoral student, Xiao Wang.

April 2013 – Completed a two-year term as Chair of the New Technology Committee of the Society of Plastics Engineers.

March 2013 – Received a no-cost extension from Triangle Tire Company, Ltd., for “Materials Solutions for Improving Rolling Resistance without Compromising Crack Resistance and Wet Skid Resistance.” The total award to date is $239,160.

March 2013 – Delivered an invited talk on “High Throughput Nanofibers by Gas Jet Method: Unique Morphologies and Applications” at the 5th International Conference on Rubber and Rubber-like Materials, held March 6-9 in Kharagpur, India.

February 2013 – Awarded $33,405 from PolyOne for a Community Industrial Assistantship for doctoral student, Kushal Bahl.


November 2012 – Received additional funding of $5,863 from PolyOne for a Community Industrial Assistantship for doctoral student, Rafael Benavides Gonzalez.

Dr. Alamgir Karim
May 2013 - Received a no-cost extension from the U.S. Department of Energy for “In-situ Neutron Scattering Determination of 3D Phase-morphology Correlations in Fullerene-block Copolymer Systems.” The total award to date is $881,066.

April 2013 – Received a no-cost extension from the National Science Foundation for “Collaborative Research: Fundamentals of Block Copolymer Ordering during Cold Zone Annealing.” Karim has received a total of $300,000 to date.

January 2013 – Awarded $31,531 from Schneller for a Community Industrial Assistantship for master’s student, Jose Chapa Garza.

November 2012 – Promoted to Associate Dean for Research in the College of Polymer Science and Polymer Engineering.

Dr. Thein Kyu
April 2013 – Received an additional $125,000 from the National Science Foundation for “Free Standing Flexible Lithium-ion Polymer Electrolyte Membranes formed by Photopolymerization.” This brings Kyu’s total award to $285,000.

January 2013 – Awarded $50,000 from the Ohio Soybean Council for “Plasticization of PVC Tubings by Genistin Modified Soybean Oils with Improved Anti-oxidant and Anti-inflammatory Properties for Medical Applications.”

Dr. Erol Sancaktar
April 2013 – Along with Co-Pls, Drs. Celal Batur and Minel Braun, from UA’s Department of Mechanical Engineering, was awarded $89,475 from the Lubrizol Corporation for “Improvement in Operational Characteristics of Polymer Fiber Mat-based Wet Friction Film Components Used in Torque Converters: Improvement and Measurement of ATF Adsorption Capability.”

March 2013 – Along with Co-Pls, Drs. Celal Batur and Minel Braun, both of Mechanical Engineering, was awarded $89,475 from LUK, Inc., for “Improvements in Operational Characteristics of Polymer Fiber Mat-based Wet Friction Film Components Used in Torque Converters.”

January 2013 – Received $10,000 from Denso International America, Inc., for proprietary evaluations.

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January 2013 – Received $10,000 from Denso International America, Inc., for proprietary evaluations.

Dr. Robert Weiss
Is the Theme Organizer for the Fall 2013 meeting of the American Chemical Society to be held Sept. 8-12, 2013, in Indianapolis, Ind.

May 2013 – Received supplemental funding in the amount of $6,500 from the National Science Foundation to fund a summer Research Experience for Undergraduates (REU) on the grant, “Collaborative Research: Dynamics of Ionomer Melts.” Weiss has received a total of $226,197 to date.

May 2013 – Awarded $368,237 from the National Science Foundation for “High Temperature Shape Memory Polymers.”

April 2013 – Awarded $325,769 from the National Science Foundation for “Manufacturing of Strong, Tough Hybrid Hydrogels.”

CONGRATULATIONS TO ALL THE WINNERS!

STAFF

Cheryl Slusarczyk
Re-elected to the Staff Employee Advisory Committee (SEAC) for another three-year term. Slusarczyk is working on her master’s degree in teaching and training technical professionals (MSTTP).

Deb Wilhite
Is now serving on the communications subcommittee of University Council. Wilhite was appointed as an at-large representative of the Staff Employee Advisory Committee (SEAC).

STUDENTS

Derek Quade
Along with wife, Penelope, welcomed the birth of their son, Colin James, on Feb. 9, 2013. He joins big sister, Mina, 2. Quade is a doctoral student studying with Dr. Sadhan Jana.

Gurpreet Singh
Is a 2013 Finalist for the AkzoNobel Student Award in Applied Polymer Science, American Chemical Society, Polymer Materials: Science and Engineering Division. He will compete with five other graduate students from all over the United States for the award. Singh is a Ph.D. student with Dr. Alamgir Karim.

Singh, along with Saurabh Batra, Ren Zhang, Hongyi Yuan, Dr. Miko Cakmak, Dr. Alamgir Karim (all from The University of Akron), Dr. Kevin G. Yager of Brookhaven National Laboratory, and Dr. Brian Berry from the University of Arkansas at Little Rock, published “Large-Scale Roll-to-Roll Fabrication of Vertically Oriented Block Copolymer Thin Films.” ACS Nano (Web), May 6, 2013. http://pubs.acs.org/doi/abs/10.1021/nn401094s?prevSearch=Gurpreet%2BSingh&searchHistoryKey

C O N G R A T U L A T I O N S T O A L L T H E W I N N E R S !

Student Award Winners Honored

On May 10, 2013, during the second day of the College of Polymer Science and Polymer Engineering’s 25th Anniversary Celebration, student award winners of the past year were recognized before the start of the afternoon portion of the symposium.
Inaugural SABIC Lectureship in Polymer Engineering began on a high note

BY SADHAN JANA

About 100 attendees each day graced the occasion and listened to Professor Han E. H. Meijer of Eindhoven University of Technology, The Netherlands, at the inaugural SABIC Lectureship in Polymer Engineering. The lectureship covered two topics – Mechanical Performance of Polymers and Fractal Structures in Polymer Processing – both of great interest to the sponsoring agency, Saudi Basic Industries Corporation (SABIC), and close to the heart of polymer engineering students and faculty.

Professor Meijer used a unique approach in attracting the audience’s attention to these seemingly broad topics. While speaking on mechanical performance of polymers, he began with the first principles to illustrate the concepts involved, brought in relevant examples from industrial applications, and guided us through decades of theoretical research work on the subjects to arrive at the present level of understanding. His second talk on fractal structures in polymer processing involved using plain old injection molding techniques to produce polymer articles with intricate features commonly fabricated by several additive manufacturing methods. This required an artist’s acumen to design the flow channels and molds, a first-class polymer engineer to analyze the flow of two or more materials in the tiny channels using the theory of microfluidic flows, and ingenuity to fabricate the mold and conduct experiments.

At the conclusion of the two-day event, Professor Meijer was presented with a plaque to commemorate the occasion by Dr. James Scobbo of SABIC.

» Courtesy of Distinguished Professor, Dr. Miko Cakmak, this photo shows the local heating system that is part of the Milacron co-extrusion system. The tubes locally heat films to even out the optical properties.

» Dr. Han E. H. Meijer (L) accepts an appreciation plaque from Dr. James Scobbo of SABIC.
A delightful, well-attended reception for alumni, industry and academic guests, faculty, students and friends of the Departments of Polymer Engineering and Polymer Science was held during the Society of Plastics Engineers Annual Technical Meeting (SPE ANTEC), on Tuesday, April 23, 2013. The private banquet room of McCormick & Schmick’s, which overlooked the colorful square of downtown Cincinnati, provided the perfect backdrop for a very enjoyable evening.

Earlier in the day, SPE held a special symposium, “Engineering Properties and Structure,” to honor Dr. Avraam Isayev and his many contributions to scientific research. Speaking at the symposium were Dr. Miko Cakmak (UA), Dr. Eric Baer (Case Western Reserve University), Dr. Mahesh Gupta (Michigan Tech), Dr. Musa Kamal (McGill University), Dr. David Kazmer (UMass Lowell), and Dr. Petr Saha (Tomas Bata University, Zlin, Czech Republic). Accordingly, a number of Isayev’s former and current students attended the reception to congratulate their adviser.

Special thanks go to DPE students Rostyslav Dolog, Sahil Gupta, Keyuan Huang, Tian Liang, and Ying Shi, and post-doc, Dr. Jola Marszalek, for assisting with check-in and welcoming guests. Thanks also to Melissa Bowman, who co-hosted the event for the first time (since the reception expanded to include polymer science alumni), and to both Melissa and Dr. Miko Cakmak for photos of the event.


Student Ilis Nugay (L) with alum, Dr. Carla Martins (2004) of the University of Minho, Portugal.

» Celebrating in Cincinnati - 2013 ANTEC Reception
Dr. Avraam Isayev with Dr. Petr Saha from Tomas Bata University, Luba Isayev, Dr. Joseph Golba from PolyOne, Dr. Miko Cakmak, and Dr. Sadhan Jana.

Attendees from the University of Leoben in Austria included (L-R) Dr. Stephan Laske, Andreas Witschnigg, Hannelore Mattausch (formerly a visiting scholar in DPE), and Bernd Haar.

Dr. Jay Yun (2003) of Schlumberger, Dr. Srinirpura, and Dr. Elliot Lee (Ph.D. 2001), both of General Cable.

Students Rabih Mansour (Mechanical Engineering), Ying Shi, and Rostyslav Dolog.
# Recent Polymer Engineering Graduates

## FALL 2012

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
<th>Title</th>
<th>Adviser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sasiwimon Buddhiranon</td>
<td>Ph.D.</td>
<td>&quot;Phytochemical Modification of Biodegradable/Biocompatible Polymer Blends with Improved Immunological Responses&quot;</td>
<td>Dr. Thein Kyu</td>
</tr>
<tr>
<td>Mauricio Echeverri</td>
<td>Ph.D.</td>
<td>&quot;Phase Diagram Approach to Fabricating Electro-Active Flexible Films: Highly Conductive, Stretchable Polymeric Solid Electrolytes and Cholesteric Liquid Crystal Flexible Displays&quot;</td>
<td>Dr. Thein Kyu</td>
</tr>
</tbody>
</table>

## SPRING 2013

<table>
<thead>
<tr>
<th>Name</th>
<th>Degree</th>
<th>Title</th>
<th>Adviser</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rafael E. Benavides Gonzalez</td>
<td>Ph.D.</td>
<td>&quot;Gas Jet Process for Production of Sub-micron Fibers&quot;</td>
<td>Dr. Sadhan Jana</td>
</tr>
<tr>
<td>Qinyuan Chai</td>
<td>M.S.</td>
<td>&quot;Synthesis and Characterization of Ionomically Crosslinked Networks&quot;</td>
<td>Dr. Kevin Cavicchi</td>
</tr>
<tr>
<td>Ying Chen</td>
<td>M.S.</td>
<td>&quot;Simple Fabrication of Hierarchical Multiscale Patterned Flexible PDMS Film and Ice-retarding Property Study&quot;</td>
<td>Dr. Alamgir Karim</td>
</tr>
<tr>
<td>Jaesen Choi</td>
<td>Ph.D.</td>
<td>&quot;Ultrasonically Aided Extrusion of Rubber Nanocomposites and Rubber Blends&quot;</td>
<td>Dr. Avraam Isayev</td>
</tr>
<tr>
<td>Fatemehsadat Emami</td>
<td>Ph.D.</td>
<td>&quot;Thermodynamically Consistent Interatomic Potentials for Silica to Design Specifically Binding Peptides: Role of Surface Chemistry, pH, and Amino Acid Sequence&quot;</td>
<td>Dr. Hendrik Heinz</td>
</tr>
<tr>
<td>Guopeng Fu</td>
<td>M.S.</td>
<td>&quot;Molecular Complexation and Phase Diagrams of Urea/Polyethylene Glycol Mixtures&quot;</td>
<td>Dr. Thein Kyu</td>
</tr>
<tr>
<td>Senlong Gu</td>
<td>M.S.</td>
<td>&quot;Effect of Polybenzoxazine on Properties of Shape-memory Polyurethanes with Glassy and Crystalline Soft Segments&quot;</td>
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<td>Yuanhao Guo</td>
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<td>Bohao Li</td>
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<td>&quot;Room Temperature Processed Molybdenum Oxide Thin Film as a Hole Extraction Layer for Polymer Photovoltaic Cells&quot;</td>
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<td>Zhehui Li</td>
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<td>Tian Liang</td>
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- "Force Field Parameters, Molecular Models, and Adsorptions of Biomolecules on Hydroxyapatite at Aqueous Interfaces"
- Adviser: Dr. Hendrik Heinz

## Hua Liu, Ph.D.
- "Transport Mechanisms and Surface Properties Study on Polymer-based Solar Cells"
- Adviser: Dr. Hendrik Heinz

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