

YoungMan Yoo

School ADDRESS

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Chemicals R&D Center, SK Chemicals,
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POSITION

- 08/2013 – Present **Purdue University**, Indiana, USA
- Graduate Student in School of Materials Engineering
- 01/2009 – Present **SK Chemicals**, Gyeonggi-do, Korea
- Senior Research Engineer, Chemicals R&D Center

EDUCATION

- 08/2013 – Present **Purdue University**, Indiana, USA
- Graduate Students in School of Materials Engineering
- 03/2001 – 02/2003 **Hanyang University**, Seoul, Korea
- M.S. in Chemical Engineering with Magna Cum Laude (GPA: 4.0/4.0)
Advisor: Professor Dong-Hack Suh
Title of thesis: *Schiff Base Derivatives for Fluorescence pH Sensors and Photopattern Images*
- 03/1994 – 02/2001 **Hanyang University**, Seoul, Korea
- B.S. in Chemical Engineering and Industrial Chemistry with Cum Laude (GPA: 3.66/4.0)
 - Korean Military Service (Aug, 1995–Aug, 1997)

AWARD & HONORS

- 01/2003 – Present **SK Chemicals**, Gyeonggi-do, Korea
- The award for 2012 Lecturer of the year in new employees' training (**from CEO**)
 - The award for 2011 Employee of the Year (**from CEO**)
 - Selection of candidate to study abroad under 5 years of company supports in 2011 (Ph. D.)

- 03/2001 – 02/2003 **Hanyang University**, Seoul, Korea
- M.S. in Chemical Engineering, Research Assistantships
- 03/1994 – 02/2001 **Hanyang University**, Seoul, Korea
- Entrance into Dept. of Industrial Chemistry as a top ranked student, Feb 1994
 - B.S. in Chemical Engineering
 - Top Scholarships - spring '94, fall '99, Honor Scholarships - fall '98, spring '99, spring '00, fall '00

Work EXPERIENCE

- 01/2015 – 05/2015 **Purdue University**, Indiana, USA
- Teaching Assistant, **Materials Processing Laboratory**, Spring 2014
- 08/2013 – Present **Purdue University**, Indiana, USA
- Research Title: **Development of Microcapsules Containing Surface Modified Cellulose Nanocrystals for Optical Applications**
- 06/2010 – 07/2013 **SK Chemicals**, Gyeonggi-do, Korea
- Project Manager at PLA R&D Team, Chemicals R&D Center
 - Project experience for **Development of New Flexible PLA Resins**
 1. Design and synthesis of soft-linkage incorporated polymer structure
 2. Setting up large-scale polymerization process of flexible PLA resins
 3. Development of products for bi-axially oriented film, injection molding, and spinning fiber
 - Partner with Purac, NatureWorks, SKC, Huvis, FKUR, LG Hausys, and Evonik
 4. Registration for New Chemical Substances (TSCA, REACH, KECI, ENCS and CRC)
 5. Certificate of Biodegradability, Bio-content, and Food Contact Notification of Flexible PLA
- 01/2009 – 06/2010 **SK Chemicals**, Gyeonggi-do, Korea
- Senior Research Engineer at PLA R&D Team, Chemicals R&D Center
 - Project experience for **Development of New Stereo-complex PLA resins**
 1. Setting up large-scale polymerization process of conventional PLLA and PDLA
 2. Development of heat resistant, water resistant, and high impact stereo-complex PLA for injection molding and spinning fiber
- 01/2007 – 08/2009 **SK Chemicals**, Gyeonggi-do, Korea
- Research Engineer at Specialty Chemicals Division, Chemicals R&D Center
 - Project experience for **Development of UV Cross-linkable Urethane-acrylate**
 1. Synthesis of urethane acrylate and development of acrylate formulation for Liquid Photopolymer Plate-making System and Plastic Hard Coating
- 01/2003 – 10/2010 **SK Chemicals**, Gyeonggi-do, Korea

- Research Engineer at Specialty Chemicals Division, Chemicals R&D Center
- Project experience for **Development of New Copolyester Binder**
 1. Development of polyester hot-melt adhesive for Flat Flexible Cable and Glass Fiber Mat
 2. Development of polyester toner binder for High Speed Monochrome and Color Printer
 - Increase in sales from \$2million (400 tons) in 2003 to \$11 million (2,500 tons) in 2009
 3. Development of non BPA and bio based polyester toner binder for Copier/Printer
 - Partner with Xerox Research Centre of Canada (a potential market of 10,000 tons)

03/2001 – 02/2003

Hanyang University, Seoul, Korea

- Information and Communication Materials Laboratory, Department of Chemical Engineering
- Project experience for **Development of POF and Fluorescence Materials**
 1. Synthesis of fully or partially fluorinated polymers for Plastic Optical Fiber (POF)
 2. Study on schiff base derivatives for Fluorescence pH Sensors and Photopattern Images

JOURNAL PUBLICATIONS

1. Nam Choul Yang, Sang Min Lee, **Young Man Yoo**, Jae Keoyng Kim, and Dong Hack Suh, "New blue electroluminescent n-type polyfluorene copolymer with an 1,3,4-oxadiazole unit", Journal of Polymer Science : Polymer Chemistry, 42(5), 1058-1068 (2004).
2. Dong Hack Suh, Woo Young Chung, Jong Kyu Kim, **Young Man Yoo**, "Fluorinated polymer in optical communication", Polymer Science and Technology (written in Korean), 12(6), 823-831, (2001).

Patents

1. KR20130135758 POLYLACTIC ACID RESIN AND FILM FOR PACKAGING COMPRISING THE SAME
2. KR20130139691 POLYLACTIC ACID RESIN FILM
3. KR20130139690 POLYLACTIC ACID RESIN COMPOSITION AND PACKAGING FILM
4. KR20130139441 POLYLACTIC ACID RESIN COMPOSITION AND FILM FOR PACKAGING COMPRISING THE SAME
5. PCT/KR11/08309 POLYLACTIC ACID RESIN COMPOSITION AND PACKAGING FILM
6. PCT/KR11/08308 POLYLACTIC ACID RESIN FILM
7. PCT/KR11/08307 POLYLACTIC ACID RESIN, PREPARATION METHOD THEREOF, AND PACKAGING FILM COMPRISING SAME
8. PCT/KR11/03710 BLEND OF POLYLACTIC ACID RESIN AND COPOLYESTER RESIN, AND MOLDED PRODUCT USING SAME
9. PCT/KR08/04068 POLYESTER RESIN AND TONER INCLUDING THE SAME
10. PCT/KR08/04067 POLYESTER RESIN AND TONER INCLUDING THE SAME
11. PCT/KR06/02810 POLYESTER RESIN AND TONER INCLUDING THE SAME
12. PCT/KR05/04431 POLYESTER RESIN AND TONER INCLUDING THE SAME
13. KR20120094552 POLYLACTIC ACID RESIN FILM
14. KR20120086118 POLYLACTIC ACID RESIN FILM
15. KR20120086117 POLYLACTIC ACID RESIN FILM
16. KR20120068552 METHOD FOR PREPARING POLYLACTIC ACID RESIN
17. KR20120068550 POLYLACTIC ACID RESIN COMPOSITION AND FILM FOR PACKAGING COMPRISING THE SAME
18. KR1191968 POLYLACTIC ACID RESIN AND FILM FOR PACKAGING COMPRISING THE SAME
19. KR1191967 POLYLACTIC ACID RESIN AND FILM FOR PACKAGING COMPRISING THE SAME
20. KR1191966 POLYLACTIC ACID RESIN AND FILM FOR PACKAGING COMPRISING THE SAME
21. KR1191661 POLYLACTIC ACID RESIN AND FILM FOR PACKAGING COMPRISING THE SAME

22. KR20110127795 BLEND OF POLYLACTIC ACID RESIN AND COPOLYESTER RESIN AND ARTICLES USING THE SAME
23. KR20110081572 POLYESTER RESIN AND TONER INCLUDING THE SAME
24. KR20110081571 POLYESTER RESIN AND TONER INCLUDING THE SAME
25. KR20110081570 POLYESTER RESIN AND TONER INCLUDING THE SAME
26. KR20110076309 LIGHTWEIGHT GLASS FIBER COMPLEX MATERIAL AND METHOD OF PRODUCING SAME
27. KR20100078855 POLYESTER RESIN AND GLASS FIBER STRAND MAT INCLUDING THE SAME
28. KR20100078843 POLYESTER RESIN AND TONER INCLUDING THE SAME
29. KR20090052623 POLYESTER RESIN AND TONER INCLUDING THE SAME
30. KR20090052615 POLYESTER RESIN AND TONER INCLUDING THE SAME
31. KR20080051441 POLYESTER RESIN AND TONER INCLUDING THE SAME
32. KR20080051252 POLYESTER RESIN AND TONER INCLUDING THE SAME
33. KR20080048198 POLYESTER RESIN HAVING IMPROVED FIXING PROPERTY AND TONER INCLUDING THE SAME
34. KR20080047798 POLYESTER RESIN AND TONER INCLUDING THE SAME
35. KR20080046951 POLYESTER RESIN AND TONER INCLUDING THE SAME
36. KR20070063059 POLYESTER RESIN HAVING CHARGE CONTROLLING AGENT AND TONER INCLUDING THE SAME
37. KR20060074092 TONER COMPOSITION HAVING IMPROVED FIXING PROPERTY
38. KR20060072485 POLYESTER RESIN FOR ELECTROPHOTOGRAPHY TONER, AND TONER PRODUCED USING THE SAME
39. KR1155081 POLYESTER RESIN AND TONER INCLUDING THE SAME
40. KR1155074 POLYESTER RESIN FOR ELECTROPHOTOGRAPHY TONER, AND TONER PRODUCED USING THE SAME
41. KR1052123 HOT - MELT TYPE ADHESIVE COMPOSITION, AND LAMINATE COMPRISING THE COMPOSITION AS ADHESIVE LAYER

PROCEEDINGS and PRESENTATIONS

1. Nam Choul Yang, Young Man Yoo, Jong Kyu Kim, and Dong Hack Suh, "Fluorescence image pattern using a chemically amplified diphenylmaleimide dye", 225th ACS national meeting, New Orleans, USA, 2003. 03. 23 (2003), Sponsor : Division of Polymer Chemistry, Inc.
2. Nam Choul Yang, Young Man Yoo, Jong Kyu Kim, and Dong Hack Suh, "Fluorescence image pattern using a chemically amplified diphenylmaleimide dye", Polymer preprint, 44(1), 1169-1170 (2003).

TECHNICAL SKILLS

1. Separation Analysis (GC, LC, IC, GPC), Structure Analysis (IR, NMR, MS, Partcles Analyzer)
2. Inorganic Analysis (AAS, ICP-AES), Surface Analysis (SEM, EDAX, AFM),
3. Property Analysis (DSC, TGA, Rheometer, Viscometer), Mechanical properties (Tensile, Tear, Flexural, Abrasion)
4. Extrusion/Injection Molding, Blade Mixer, Air Jet Mill Pulverizing, Coating (Roll, Bar, Knife, Spin, Spray)
5. Comprehension of Batch & Continuous Reactor System

REFERENCES

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