

Jeyoung Park (박 제 영)

Associate Professor, Ph.D.
Department of Chemical and Biomolecular Engineering
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Appointments

Associate Professor / Department of Chemical and Biomolecular Engineering Sogang University	2022.09 - Present Seoul, Korea
Affiliate Faculty / Div. of Environ. Sci. & Eng. / POSTECH POSTECH (Pohang University of Science and Technology)	2020.07 – 2022.08 Pohang, Korea
Principal Researcher / Research Center for Bio-based Chemistry KRICT (Korea Research Institute of Chemical Technology)	2014.09 – 2022.08 Ulsan, Korea
Associate Professor / Dept. of Advanced Materials and Chemical Engineering UST (University of Science & Technology)	2016.03 – 2022.08 Daejeon, Korea
Researcher / Chemical R&BD Center SK Innovation	2012.08 – 2014.08 Daejeon, Korea

Education

Ph.D. in Chemistry, Korea Advanced Institute of Science & Technology (KAIST), Daejeon, Korea	2012.08
Thesis: Controlled Polymerization and Self-Assembly of Poly(arylene ether sulfone)s	
Advisor: Prof. Sang Youl Kim	
M.S. in Chemistry, KAIST, Daejeon, Korea	2008.08
Thesis: Synthesis and Characterization of Poly(arylene ether sulfone)s with Controlled Molecular Weights and Narrow Polydispersities through Chain-growth Polycondensation	
Advisor: Prof. Sang Youl Kim	
B.S. in Chemistry, <i>Summa Cum Laude</i> , KAIST, Daejeon, Korea	2007.02
(minor in Business Economics Program)	

List of Selected Publications (as a corresponding author)

[Sustainable Polymers and Nanocomposites]

090. Network of cyano-p-aramid nanofibres creates ultrastiff and water-rich hydrosponges, *Nat. Mater.*, **2024**, 23, 414. **(Nature Research Highlight)**
091. Optimizing bioplastics translation, *Nat. Rev. Bioeng.*, **2024**, 2, 289. **(Front Cover)**
032. Sustainable and recyclable super engineering thermoplastic from biorenewable monomer, *Nat. Commun.*, **2019**, 10, 1601. **(Editor's Choice, Tech transferred, 21 Altmetric)**
026. Preparation of synergistically reinforced transparent bio-polycarbonate nanocomposites with highly dispersed cellulose nanocrystals, *Green Chem.*, **2019**, 21, 5212. **(Front Cover, 2019 Hot Paper selected, 30 Altmetric)**
048. Biodegradable nanocomposite of poly (ester-co-carbonate) and cellulose nanocrystals for tough tear-resistant disposable bags, *Green Chem.*, **2021**, 23, 2293. **(Back Cover, 2021 Hot Paper selected)**
066. Biodegradable chito-beads replacing non-biodegradable microplastics for cosmetics, *Green Chem.*, **2021**, 23, 6953. **(Inside Front Cover, Tech transferred)**.
047. Sustainable, self-cleaning, transparent, and moisture/oxygen-barrier coating film for food packaging, *Green Chem.*, **2021**, 23, 2658. **(Back Cover, Green Chemistry Editor's Choice)**
058. Micro-spray-based high-throughput screening system for bioplastic-degrading microorganisms, *Green Chem.*, **2021**, 23, 5429. **(Back Cover, 2021 Hot Paper selected)**
065. Strong, Multifaceted Guanidinium-Based Adhesion of Bioorganic Nanoparticles to Wet Biological Tissue, *JACS Au*, **2021**, 1, 1399. **(Supporting Cover)**
053. Biodegradable, Efficient, and Breathable Multi-Use Face Mask Filter, *Adv. Sci.*, **2021**, 8, 2003155. **(Front Cover, 12 Altmetric)**
036. Rediscovery of nylon upgraded by interactive biorenewable nano-fillers, *Nanoscale*, **2020**, 12, 2393. **(Front Cover)**
043. Aramid Nanofiber Templated In Situ S_NAr Polymerization for Maximizing the Performance of All-Organic Nanocomposites, *ACS Macro Lett.*, **2020**, 9, 558.
027. Nonstop Monomer-to-Aramid Nanofiber Synthesis with Remarkable Reinforcement Ability, *Macromolecules*, **2019**, 52, 923.

[Self-healing Polymers]

017. Superior Toughness and Fast Self-Healing at Room Temperature Engineered by Transparent Elastomers, *Adv. Mater.*, **2018**, 30, 1705145. **(Front Cover, Tech transferred, 32 Altmetric)**
042. A Self-Healing Nanofiber-Based Self-Responsive Time-Temperature Indicator for Securing a Cold-Supply Chain, *Adv. Mater.*, **2020**, 32, 1907064. **(Frontispiece, Tech transferred, 51 Altmetric)**
050. Mechano-responsive hydrogen-bonding array of thermoplastic polyurethane elastomer captures both strength and self-healing, *Nat. Commun.*, **2021**, 12, 621.
035. Extremely Fast Self-Healable Bio-Based Supramolecular Polymer for Wearable Real-Time Sweat-Monitoring Sensor, *ACS Appl. Mater. Interfaces*, **2019**, 11, 46165. **(Press released by ACS, 38 Altmetric, Virtual Issue Collected)**
045. Malleable Hydrogel Embedded with Micellar Cargo-Expellers as a Prompt Transdermal Patch, *Adv. Healthcare Mater.*, **2020**, 9, 2000876. **(Back Cover)**
061. Recent progress in self-healing polymers and hydrogels based on reversible dynamic B–O bonds: boronic/boronate esters, borax, and benzoxaborole, *J. Mater. Chem. A*, **2021**, 9, 14630. **(2021 Hot Paper selected, Front Cover)**
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Honors and Awards

- The 1st EYSA·Ecopro Young Scientist Awards-Environment division (에코프로 젊은 과학자상-환경부 문) (2023)
 - TCI-Emerging scholar award (신진학술상) in Fall meeting of Korean Chemical Society (Polymer Chemistry Division) (2023)
 - The Best 100 Technologies among National R&D Projects by Ministry of Science and ICT of 2021 (2021)
 - 자가치유 물질기반 온도변화 감지필름 제조기술 (오동엽, 황성연, 박제영 외)
 - The Best 100 Technologies among National R&D Projects by Ministry of Science and ICT of 2020 (2020)
 - 비닐봉투용 고강도 생분해성 플라스틱 제조 기술개발 (황성연, 박제영, 오동엽 외)
 - KRICT Team-Grand Prize of 2020, KRICT (2020)
 - Ulsan Metropolitan Award in Science Technology and Industrial Development of 2019 (2019)
 - Excellence Staff Award of 2018, KRICT (2018)
 - KRICT Innovation Team Award of 2017, KRICT (2017)
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Academic Activities

General secretary, The polymer Society of Korea: Eco Materials Division (2023)

Organizing secretary, Korean Chemical Society: Polymer Chemistry Division (2022)

Organizing committee, Global ESG Forum (Waste: Plastic) parallel with Nature Forum (2022)

Secretariat, POLYCONDENSATION 2022 (2022)

Special Issue Editor in *International Journal of Molecular Sciences* (2021~2022): Special Issue "Self-Healing Polymers and Composites"

Program Committee [Polymers and Environment], IUPAC-MACRO2020+ (2021)

Reviewer Community Member, *Green Chemistry*, and other RSC journals (2021~)

Reviewer Board Member, *Nanomaterials* (2020~)

Chief-program organizer of Global Symposium on Bio-based Polymeric Materials (KRICT) (2018~)

Co-organizer of 2018 Fall Meeting of The Polymer Society of Korea (2018)

Member, Polymer Society of Korea

Member, Korean Chemical Society

Member, The Korean Institute of Chemical Engineers

Peer-reviewer records in *Advanced Materials*, *Advanced functional Materials*, *Small* (Wiley); *Nature Communications* (NPG); *Green Chemistry*, *Materials Horizons*, *Journal of Materials Chemistry A/C*, *Chemical Communications*, *Polymer Chemistry* (RSC); *ACS Nano*, *ACS Materials Letters*, *ACS Applied Materials & Interfaces*, *Macromolecules*, *ACS Sustainable Chemistry & Engineering*, *The Journal of Physical Chemistry* (ACS); *Chemical Engineering Journal*, *Carbohydrate Polymers* (Elsevier)