

# Nae Yoon Lee

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

100  
papers

1,829  
citations

25  
h-index

37  
g-index

104  
ext. papers

2,252  
ext. citations

5.5  
avg. IF

5.87  
L-index

#	Paper	IF	Citations
100	A facile route for irreversible bonding of plastic-PDMS hybrid microdevices at room temperature. <i>Lab on A Chip</i> , <b>2010</b> , 10, 1274-80	7.2	204
99	Novel poly(dimethylsiloxane) bonding strategy via room temperature "chemical gluing". <i>Langmuir</i> , <b>2009</b> , 25, 3861-6	4	74
98	Integration of a microfluidic polymerase chain reaction device and surface plasmon resonance fiber sensor into an inline all-in-one platform for pathogenic bacteria detection. <i>Sensors and Actuators B: Chemical</i> , <b>2017</b> , 242, 1-8	8.5	66
97	Advancements and frontiers in nano-based 3D and 4D scaffolds for bone and cartilage tissue engineering. <i>International Journal of Nanomedicine</i> , <b>2019</b> , 14, 4333-4351	7.3	60
96	Nanofeature-Patterned Polymer Mold Fabrication toward Precisely Defined Nanostructure Replication. <i>Chemistry of Materials</i> , <b>2005</b> , 17, 5867-5870	9.6	49
95	Instantaneous room temperature bonding of a wide range of non-silicon substrates with poly(dimethylsiloxane) (PDMS) elastomer mediated by a mercaptosilane. <i>Lab on A Chip</i> , <b>2015</b> , 15, 2819-25	7.2	44
94	One-step surface modification for irreversible bonding of various plastics with a poly(dimethylsiloxane) elastomer at room temperature. <i>Lab on A Chip</i> , <b>2014</b> , 14, 1564-71	7.2	44
93	Ethanol and UV-assisted instantaneous bonding of PMMA assemblies and tuning in bonding reversibility. <i>Sensors and Actuators B: Chemical</i> , <b>2013</b> , 181, 955-962	8.5	44
92	On-chip colorimetric biosensor based on polydiacetylene (PDA) embedded in photopolymerized poly(ethylene glycol) diacrylate (PEG-DA) hydrogel. <i>Biochemical Engineering Journal</i> , <b>2006</b> , 29, 103-108	4.2	44
91	Fully integrated and slidable paper-embedded plastic microdevice for point-of-care testing of multiple foodborne pathogens. <i>Biosensors and Bioelectronics</i> , <b>2019</b> , 135, 120-128	11.8	42
90	A rapid and eco-friendly isothermal amplification microdevice for multiplex detection of foodborne pathogens. <i>Lab on A Chip</i> , <b>2018</b> , 18, 2369-2377	7.2	40
89	Development of a passive micromixer based on repeated fluid twisting and flattening, and its application to DNA purification. <i>Analytical and Bioanalytical Chemistry</i> , <b>2005</b> , 383, 776-82	4.4	40
88	Lab-on-a-Chip Technology for Environmental Monitoring of Microorganisms. <i>Biochip Journal</i> , <b>2018</b> , 12, 173-183	4	40
87	A rotary microsystem for simple, rapid and automatic RNA purification. <i>Lab on A Chip</i> , <b>2012</b> , 12, 3875-81	7.2	38
86	Bubble-free on-chip continuous-flow polymerase chain reaction: concept and application. <i>Analyst</i> , <b>2011</b> , 136, 2287-93	5	38
85	Three-dimensional on-chip continuous-flow polymerase chain reaction employing a single heater. <i>Analytical and Bioanalytical Chemistry</i> , <b>2011</b> , 400, 2053-60	4.4	35
84	Pressure-driven sample injection with quantitative liquid dispensing for on-chip electrophoresis. <i>Analytical Sciences</i> , <b>2004</b> , 20, 483-7	1.7	33

83	Flow-through PCR on a 3D qiandu-shaped polydimethylsiloxane (PDMS) microdevice employing a single heater: toward microscale multiplex PCR. <i>Analyst, The</i> , <b>2012</b> , 137, 2069-76	5	32
82	Paper-Based All-in-One Origami Microdevice for Nucleic Acid Amplification Testing for Rapid Colorimetric Identification of Live Cells for Point-of-Care Testing. <i>Analytical Chemistry</i> , <b>2019</b> , 91, 11013-11022	7.8	30
81	Selective patterning and immobilization of biomolecules within precisely-defined micro-reservoirs. <i>Biosensors and Bioelectronics</i> , <b>2006</b> , 21, 2188-93	11.8	30
80	Hydrophilic composite elastomeric mold for high-resolution soft lithography. <i>Langmuir</i> , <b>2006</b> , 22, 9018-22	7.2	29
79	Hand-held syringe as a portable plastic pump for on-chip continuous-flow PCR: miniaturization of sample injection device. <i>Analyst, The</i> , <b>2012</b> , 137, 983-90	5	27
78	Modification of polycarbonate with hydrophilic/hydrophobic coatings for the fabrication of microdevices. <i>Sensors and Actuators B: Chemical</i> , <b>2014</b> , 193, 599-607	8.5	26
77	A foldable isothermal amplification microdevice for fuchsin-based colorimetric detection of multiple foodborne pathogens. <i>Lab on A Chip</i> , <b>2019</b> , 19, 1397-1405	7.2	26
76	Recent progress in smartphone-based techniques for food safety and the detection of heavy metal ions in environmental water. <i>Chemosphere</i> , <b>2021</b> , 275, 130096	8.4	26
75	Planar poly(dimethylsiloxane) (PDMS)/glass hybrid microdevice for a flow-through polymerase chain reaction (PCR) employing a single heater assisted by an intermediate metal alloy layer for temperature gradient formation. <i>Sensors and Actuators B: Chemical</i> , <b>2014</b> , 190, 177-184	8.5	25
74	Bioengineering strategies for bone and cartilage tissue regeneration using growth factors and stem cells. <i>Journal of Biomedical Materials Research - Part A</i> , <b>2020</b> , 108, 394-411	5.4	25
73	Multilayer transfer printing on microreservoir-patterned substrate employing hydrophilic composite mold for selective immobilization of biomolecules. <i>Langmuir</i> , <b>2006</b> , 22, 7689-94	4	24
72	An integrated microfluidic PCR system with immunomagnetic nanoparticles for the detection of bacterial pathogens. <i>Biomedical Microdevices</i> , <b>2016</b> , 18, 116	3.7	24
71	Fabrication of Polymerase Chain Reaction Plastic Lab-on-a-Chip Device for Rapid Molecular Diagnoses. <i>International Neurourology Journal</i> , <b>2016</b> , 20, S38-48	2.6	22
70	Microfluidic device fabrication mediated by surface chemical bonding. <i>Analyst, The</i> , <b>2020</b> , 145, 4096-4110	7.2	21
69	Non-silicon substrate bonding mediated by poly(dimethylsiloxane) interfacial coating. <i>Applied Surface Science</i> , <b>2015</b> , 327, 233-240	6.7	19
68	Portable plastic syringe as a self-actuated pump for long-distance uniform delivery of liquid inside a microchannel and its application for flow-through polymerase chain reaction on chip. <i>RSC Advances</i> , <b>2015</b> , 5, 12071-12077	3.7	18
67	Microfluidic approach for the fabrication of cell-laden hollow fibers for endothelial barrier research. <i>Journal of Materials Chemistry B</i> , <b>2018</b> , 6, 6057-6066	7.3	18
66	Fully Integrated and Foldable Microdevice Encapsulated with Agarose for Long-Term Storage Potential for Point-of-Care Testing of Multiplex Foodborne Pathogens. <i>ACS Sensors</i> , <b>2019</b> , 4, 2754-2762	9.2	17

65	Thermally robust and biomolecule-friendly room-temperature bonding for the fabrication of elastomer-plastic hybrid microdevices. <i>Lab on A Chip</i> , <b>2016</b> , 16, 3251-9	7.2	17
64	Polycarbonate bonding assisted by surface chemical modification without plasma treatment and its application for the construction of plastic-based cell arrays. <i>Sensors and Actuators A: Physical</i> , <b>2014</b> , 206, 57-66	3.9	17
63	Recent Progress in Lab-on-a-Chip Technology and Its Potential Application to Clinical Diagnoses. <i>International Neurourology Journal</i> , <b>2013</b> , 17, 2-10	2.6	17
62	Flow-through polymerase chain reaction inside a seamless 3D helical microreactor fabricated utilizing a silicone tube and a paraffin mold. <i>Analyst, The</i> , <b>2015</b> , 140, 1416-20	5	16
61	Glass-polytetrafluoroethylene-glass based sandwich microdevice for continuous-flow polymerase chain reaction and its application for fast identification of foodborne pathogens. <i>Talanta</i> , <b>2018</b> , 176, 544-550	6.2	16
60	Two-layer microdevice for parallel flow-through PCRs employing plastic syringes for semi-automated sample injection and a single heater for amplification: Toward process simplification and system miniaturization. <i>Sensors and Actuators B: Chemical</i> , <b>2013</b> , 181, 756-765	8.5	16
59	Solid-phase based on-chip DNA purification through a valve-free stepwise injection of multiple reagents employing centrifugal force combined with a hydrophobic capillary barrier pressure. <i>Analyst, The</i> , <b>2013</b> , 138, 1750-7	5	16
58	Integrated Microfluidic Preconcentration and Nucleic Amplification System for Detection of Influenza A Virus H1N1 in Saliva. <i>Micromachines</i> , <b>2020</b> , 11,	3.3	15
57	Non-photolithographic plastic-mold-based fabrication of cylindrical and multi-tiered poly(dimethylsiloxane) microchannels for biomimetic lab-on-a-chip applications. <i>RSC Advances</i> , <b>2015</b> , 5, 100905-100911	3.7	15
56	A portable microreactor with minimal accessories for polymerase chain reaction: application to the determination of foodborne pathogens. <i>Mikrochimica Acta</i> , <b>2017</b> , 184, 4225-4233	5.8	14
55	Miniaturized polymerase chain reaction device for rapid identification of genetically modified organisms. <i>Food Control</i> , <b>2015</b> , 57, 238-245	6.2	14
54	Fabrication of a foldable all-in-one point-of-care molecular diagnostic microdevice for the facile identification of multiple pathogens. <i>Sensors and Actuators B: Chemical</i> , <b>2020</b> , 314, 128057	8.5	14
53	A review on microscale polymerase chain reaction based methods in molecular diagnosis, and future prospects for the fabrication of fully integrated portable biomedical devices. <i>Mikrochimica Acta</i> , <b>2018</b> , 185, 285	5.8	14
52	A poly(dimethylsiloxane)-coated flexible mold for nanoimprint lithography. <i>Nanotechnology</i> , <b>2007</b> , 18, 415303	3.4	14
51	Control-free air vent system for ultra-low volume sample injection on a microfabricated device. <i>Analytical Sciences</i> , <b>2005</b> , 21, 465-8	1.7	12
50	Pressure-driven one-step solid phase-based on-chip sample preparation on a microfabricated plastic device and integration with flow-through polymerase chain reaction (PCR). <i>Journal of Chromatography B: Analytical Technologies in the Biomedical and Life Sciences</i> , <b>2013</b> , 936, 88-94	3.2	11
49	One-step glass-like coating of polycarbonate for seamless DNA purification and amplification on an integrated monolithic microdevice. <i>Sensors and Actuators B: Chemical</i> , <b>2014</b> , 202, 1281-1289	8.5	11
48	Clog-free and reliable solvent bonding of poly(methyl methacrylate) microdevice mediated by eco-friendly acetic acid at room temperature and its application for polymerase chain reaction and human cell culture. <i>Sensors and Actuators B: Chemical</i> , <b>2019</b> , 282, 1008-1017	8.5	11

47	One-step DNA purification and amplification on an integrated plastic microdevice for on-site identification of foodborne pathogens. <i>Analytica Chimica Acta</i> , <b>2018</b> , 1040, 63-73	6.6	10
46	Spatially defined hydrophobic coating of a microwell-patterned hydrophilic polymer substrate for targeted adhesion with high-resolution soft lithography. <i>Colloids and Surfaces B: Biointerfaces</i> , <b>2013</b> , 111, 313-20	6	10
45	Rapid Fabrication of Poly(methyl methacrylate) Devices for Lab-on-a-Chip Applications Using Acetic Acid and UV Treatment. <i>ACS Omega</i> , <b>2020</b> , 5, 17396-17404	3.9	10
44	A functionally integrated thermoplastic microdevice for one-step solid-phase-based nucleic acid purification and isothermal amplification for facile detection of foodborne pathogen. <i>Biotechnology and Bioengineering</i> , <b>2016</b> , 113, 2614-2623	4.9	10
43	Ultraviolet-induced gold nanoparticles for point-of-care testing of infectious diseases in loop-mediated isothermal amplification. <i>Lab on A Chip</i> , <b>2021</b> , 21, 700-709	7.2	10
42	Fabrication of a 3D Teflon microdevice for energy free homogeneous liquid flow inside a long microchannel and its application to continuous-flow PCR. <i>RSC Advances</i> , <b>2017</b> , 7, 10624-10630	3.7	9
41	A Simple Imprint Method for Multi-Tiered Polymer Nanopatterning on Large Flexible Substrates Employing a Flexible Mold and Hemispherical PDMS Elastomer. <i>Macromolecular Rapid Communications</i> , <b>2007</b> , 28, 1995-2000	4.8	9
40	Nanohybrid biodegradable scaffolds for TGF- $\beta$ release for the chondrogenic differentiation of human mesenchymal stem cells. <i>International Journal of Pharmaceutics</i> , <b>2020</b> , 581, 119248	6.5	8
39	Electrochemical DNA detection using Hoechst dyes in microfluidic chips. <i>Current Applied Physics</i> , <b>2012</b> , 12, 1493-1496	2.6	8
38	Targeted cell adhesion on selectively micropatterned polymer arrays on a poly(dimethylsiloxane) surface. <i>Biomedical Microdevices</i> , <b>2010</b> , 12, 13-21	3.7	7
37	Chitosan-polydopamine hydrogel complex: a novel green adhesion agent for reversibly bonding thermoplastic microdevice and its application for cell-friendly microfluidic 3D cell culture. <i>Lab on A Chip</i> , <b>2020</b> , 20, 3524-3534	7.2	7
36	Pop-up paper-based and fully integrated microdevice for point-of-care testing of vancomycin-resistant Enterococcus. <i>Sensors and Actuators B: Chemical</i> , <b>2021</b> , 345, 130362	8.5	7
35	Heat and pressure-resistant room temperature irreversible sealing of hybrid PDMS-thermoplastic microfluidic devices carbon-nitrogen covalent bonding and its application in a continuous-flow polymerase chain reaction.. <i>RSC Advances</i> , <b>2020</b> , 10, 16502-16509	3.7	6
34	Nanoporous anodic aluminum oxide internalized with gold nanoparticles for on-chip PCR and direct detection by surface-enhanced Raman scattering. <i>Analyst, The</i> , <b>2018</b> , 143, 808-812	5	6
33	Bent polydimethylsiloxane/polycarbonate hybrid microdevice for on-chip flow-through polymerase chain reaction employing a single heater. <i>Mikrochimica Acta</i> , <b>2014</b> , 181, 1697-1705	5.8	6
32	Chemically robust succinimide-group-assisted irreversible bonding of poly(dimethylsiloxane)-thermoplastic microfluidic devices at room temperature. <i>Analyst, The</i> , <b>2020</b> , 145, 6887-6894	5	6
31	Microdevice-based solid-phase polymerase chain reaction for rapid detection of pathogenic microorganisms. <i>Biotechnology and Bioengineering</i> , <b>2018</b> , 115, 2194-2204	4.9	6
30	Polydopamine aggregation: A novel strategy for power-free readout of loop-mediated isothermal amplification integrated into a paper device for multiplex pathogens detection. <i>Biosensors and Bioelectronics</i> , <b>2021</b> , 189, 113353	11.8	6

29	A paper-based colorimetric chemosensor for rapid and highly sensitive detection of sulfide for environmental monitoring. <i>Analytical Methods</i> , <b>2021</b> , 13, 1332-1339	3.2	6
28	Solvent-assisted low-temperature and low-pressure poly(methylmethacrylate) bonding coupled with selective microchannel hydrophobic coating for reliable sealing. <i>Sensors and Actuators A: Physical</i> , <b>2017</b> , 265, 168-173	3.9	5
27	Paper-Based Fluorescence Chemosensors for Metal Ion Detection in Biological and Environmental Samples. <i>Biochip Journal</i> , <b>2021</b> , 15, 216-232	4	5
26	Spatially Defined, High-Contrast, and Deformation-Free Dopamine Subtractive Thermal Transfer Printing Using a Nonelastomeric Polymeric Mold and Its Multifunctional Applications. <i>Advanced Materials Technologies</i> , <b>2019</b> , 4, 1800485	6.8	5
25	Microfluidic Approach to Generate a Tadpole-Egg-Shaped Alginate Fiber and Its Application in Tissue Engineering. <i>ACS Biomaterials Science and Engineering</i> , <b>2020</b> , 6, 1663-1670	5.5	3
24	Poly(acrylic acid) as an adhesion promoter for UV-assisted thermoplastic bonding: Application for the in vitro construction of human blood vessels. <i>Materials Science and Engineering C</i> , <b>2021</b> , 122, 111874	8.3	3
23	Fabrication of an integrated polystyrene microdevice for pre-concentration and amplification of Escherichia coli O157:H7 from raw milk. <i>Analytical Methods</i> , <b>2018</b> , 10, 5071-5077	3.2	3
22	Imprint Molding of a Microfluidic Optical Cell on Thermoplastics with Reduced Surface Roughness for the Detection of Copper Ions. <i>Analytical Sciences</i> , <b>2016</b> , 32, 85-92	1.7	2
21	Micro-perforated elastomeric poly(dimethylsiloxane) mask fabricated using high-aspect-ratio micro-pillar arrays for spatially defined surface modification: an unconventional method for establishing a microarray platform. <i>Analytical and Bioanalytical Chemistry</i> , <b>2009</b> , 394, 1227-32	4.4	2
20	Microfluidic electrical cell lysis for high-throughput and continuous production of cell-free varicella-zoster virus. <i>Journal of Biotechnology</i> , <b>2021</b> , 335, 19-26	3.7	2
19	Microfluidic-based fabrication of alginate microparticles for protein delivery and its application in the in vitro chondrogenesis of mesenchymal stem cells. <i>Journal of Drug Delivery Science and Technology</i> , <b>2021</b> , 66, 102735	4.5	2
18	Pressure-Free Assembling of Poly(methyl methacrylate) Microdevices via Microwave-Assisted Solvent Bonding and Its Biomedical Applications.. <i>Biosensors</i> , <b>2021</b> , 11,	5.9	2
17	A fully integrated microdevice for capturing, amplification, and colorimetric detection of foodborne pathogens. <i>Microsystem Technologies</i> , <b>2020</b> , 26, 3875-3883	1.7	1
16	Fabrication of a polycarbonate microdevice and boronic acid-mediated surface modification for on-chip sample purification and amplification of foodborne pathogens. <i>Biomedical Microdevices</i> , <b>2019</b> , 21, 72	3.7	1
15	Monolayer/spheroid co-culture of cells on a PDMS well plate mediated by selective polydopamine coating. <i>Journal of Materials Chemistry B</i> , <b>2020</b> , 8, 10108-10116	7.3	1
14	Spinning and Fully Integrated Microdevice for Rapid Screening of Vancomycin-Resistant. <i>ACS Sensors</i> , <b>2021</b> , 6, 2902-2910	9.2	1
13	Nucleic acid amplification-based microfluidic approaches for antimicrobial susceptibility testing. <i>Analyst, The</i> , <b>2021</b> , 146, 3101-3113	5	1
12	Construction of microfluidic blood-brain barrier model assisted by 3D coculture on cellulose fiber. <i>Microsystem Technologies</i> , <b>2021</b> , 27, 3917-3926	1.7	1

11	Fabrication of 3D continuous-flow reverse-transcription polymerase chain reaction microdevice integrated with on-chip fluorescence detection for semi-quantitative assessment of gene expression. <i>Analyst, The</i> , <b>2018</b> , 143, 5692-5701	5	1
10	Advances in Nucleic Acid Amplification-Based Microfluidic Devices for Clinical Microbial Detection. <i>Chemosensors</i> , <b>2022</b> , 10, 123	4	1
9	Emerging bismuth-based direct Z-scheme photocatalyst for the degradation of organic dye and antibiotic residues.. <i>Chemosphere</i> , <b>2022</b> , 134227	8.4	1
8	Recent advances in the fabrication strategies of paper-based microfluidic devices for rapid detection of bacteria and viruses. <i>Microchemical Journal</i> , <b>2022</b> , 180, 107548	4.8	1
7	Fabrication of polycaprolactone nanofibrous membrane-embedded microfluidic device for water filtration. <i>Journal of Applied Polymer Science</i> , <b>2020</b> , 137, 49207	2.9	0
6	Fabrication of a fully integrated paper microdevice for point-of-care testing of infectious disease using Safranin O dye coupled with loop-mediated isothermal amplification.. <i>Biosensors and Bioelectronics</i> , <b>2022</b> , 204, 114080	11.8	0
5	Off-Grid Electrical Cell Lysis Microfluidic Device Utilizing Thermoelectricity and Thermal Radiation. <i>Chemosensors</i> , <b>2021</b> , 9, 292	4	0
4	Bimetallic Thin-Film Combination of Surface Plasmon Resonance-Based Optical Fiber Cladding with the Polarizing Homodyne Balanced Detection Method and Biomedical Assay Application. <i>Langmuir</i> , <b>2020</b> , 36, 9967-9976	4	0
3	Ferrowax microvalves for fully automated serial dilution on centrifugal microfluidic platforms. <i>Biotechnology Journal</i> , <b>2021</b> , 16, e2100131	5.6	
2	Ultrasensitive biosensors based on waveguide-coupled long-range surface plasmon resonance (WC-LRSPR) for enhanced fluorescence spectroscopy.. <i>RSC Advances</i> , <b>2021</b> , 11, 22450-22460	3.7	
1	Universal Printing Technique of Polydopamine onto Versatile Surfaces for High-Resolution Cell Patterning Using Wet Elastomeric Stamp. <i>Advanced Materials Technologies</i> , 2200404	6.8	