

# Geelsu Hwang

## 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.

52  
papers

2,374  
citations

29  
h-index

48  
g-index

53  
ext. papers

3,017  
ext. citations

7.9  
avg, IF

5.27  
L-index

#	Paper	IF	Citations
52	Development of nanosilver and multi-walled carbon nanotubes thin-film nanocomposite membrane for enhanced water treatment. <i>Journal of Membrane Science</i> , <b>2012</b> , 394-395, 37-48	9.6	290
51	pH-activated nanoparticles for controlled topical delivery of farnesol to disrupt oral biofilm virulence. <i>ACS Nano</i> , <b>2015</b> , 9, 2390-404	16.7	201
50	Streptococcus mutans-derived extracellular matrix in cariogenic oral biofilms. <i>Frontiers in Cellular and Infection Microbiology</i> , <b>2015</b> , 5, 10	5.9	168
49	Nanocatalysts promote Streptococcus mutans biofilm matrix degradation and enhance bacterial killing to suppress dental caries in vivo. <i>Biomaterials</i> , <b>2016</b> , 101, 272-84	15.6	156
48	Dextran-Coated Iron Oxide Nanoparticles as Biomimetic Catalysts for Localized and pH-Activated Biofilm Disruption. <i>ACS Nano</i> , <b>2019</b> , 13, 4960-4971	16.7	124
47	Candida albicans mannans mediate Streptococcus mutans exoenzyme GtfB binding to modulate cross-kingdom biofilm development in vivo. <i>PLoS Pathogens</i> , <b>2017</b> , 13, e1006407	7.6	93
46	The impacts of ozonation on oil sands process-affected water biodegradability and biofilm formation characteristics in bioreactors. <i>Bioresour Technol</i> , <b>2013</b> , 130, 269-77	11	82
45	Topical ferumoxytol nanoparticles disrupt biofilms and prevent tooth decay in vivo via intrinsic catalytic activity. <i>Nature Communications</i> , <b>2018</b> , 9, 2920	17.4	79
44	Catalytic antimicrobial robots for biofilm eradication. <i>Science Robotics</i> , <b>2019</b> , 4,	18.6	77
43	Bacterial-derived exopolysaccharides enhance antifungal drug tolerance in a cross-kingdom oral biofilm. <i>ISME Journal</i> , <b>2018</b> , 12, 1427-1442	11.9	73
42	l-Arginine Modifies the Exopolysaccharide Matrix and Thwarts Streptococcus mutans Outgrowth within Mixed-Species Oral Biofilms. <i>Journal of Bacteriology</i> , <b>2016</b> , 198, 2651-61	3.5	66
41	Fabrication of porous polymeric nanocomposite membranes with enhanced anti-fouling properties: Effect of casting composition. <i>Journal of Membrane Science</i> , <b>2013</b> , 444, 449-460	9.6	63
40	Simultaneous spatiotemporal mapping of in situ pH and bacterial activity within an intact 3D microcolony structure. <i>Scientific Reports</i> , <b>2016</b> , 6, 32841	4.9	56
39	Binding Force Dynamics of Streptococcus mutans-glucosyltransferase B to Candida albicans. <i>Journal of Dental Research</i> , <b>2015</b> , 94, 1310-7	8.1	53
38	Adhesion of nano-sized particles to the surface of bacteria: mechanistic study with the extended DLVO theory. <i>Colloids and Surfaces B: Biointerfaces</i> , <b>2012</b> , 97, 138-44	6	51
37	Characterization and optimization of pH-responsive polymer nanoparticles for drug delivery to oral biofilms. <i>Journal of Materials Chemistry B</i> , <b>2016</b> , 4, 3075-3085	7.3	49
36	Implication of Surface Properties, Bacterial Motility, and Hydrodynamic Conditions on Bacterial Surface Sensing and Their Initial Adhesion. <i>Frontiers in Bioengineering and Biotechnology</i> , <b>2021</b> , 9, 643722	5.8	49

35	Analysis of the mechanical stability and surface detachment of mature <i>Streptococcus mutans</i> biofilms by applying a range of external shear forces. <i>Biofouling</i> , <b>2014</b> , 30, 1079-91	3.3	48
34	Enhanced design and formulation of nanoparticles for anti-biofilm drug delivery. <i>Nanoscale</i> , <b>2018</b> , 11, 219-236	7.7	45
33	Impact of conditioning films on the initial adhesion of <i>Burkholderia cepacia</i> . <i>Colloids and Surfaces B: Biointerfaces</i> , <b>2012</b> , 91, 181-8	6	44
32	Biofilm three-dimensional architecture influences in situ pH distribution pattern on the human enamel surface. <i>International Journal of Oral Science</i> , <b>2017</b> , 9, 74-79	27.9	40
31	Impact of an extracellular polymeric substance (EPS) pre-coating on the initial adhesion of <i>Burkholderia cepacia</i> and <i>Pseudomonas aeruginosa</i> . <i>Biofouling</i> , <b>2012</b> , 28, 525-38	3.3	40
30	Dynamics of bacterial population growth in biofilms resemble spatial and structural aspects of urbanization. <i>Nature Communications</i> , <b>2020</b> , 11, 1354	17.4	37
29	Therapeutic Strategies Targeting Cariogenic Biofilm Microenvironment. <i>Advances in Dental Research</i> , <b>2018</b> , 29, 86-92	2.3	36
28	Effect of reactor configuration and microbial characteristics on biofilm reactors for oil sands process-affected water treatment. <i>International Biodeterioration and Biodegradation</i> , <b>2014</b> , 89, 74-81	4.8	34
27	†Mangostin disrupts the development of <i>Streptococcus mutans</i> biofilms and facilitates its mechanical removal. <i>PLoS ONE</i> , <b>2014</b> , 9, e111312	3.7	34
26	The role of conditioning film formation in <i>Pseudomonas aeruginosa</i> PAO1 adhesion to inert surfaces in aquatic environments. <i>Biochemical Engineering Journal</i> , <b>2013</b> , 76, 90-98	4.2	33
25	Absorption of a volatile organic compound by a jet loop reactor with circulation of a surfactant solution: performance evaluation. <i>Journal of Hazardous Materials</i> , <b>2008</b> , 153, 735-41	12.8	31
24	Nonleachable Imidazolium-Incorporated Composite for Disruption of Bacterial Clustering, Exopolysaccharide-Matrix Assembly, and Enhanced Biofilm Removal. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 38270-38280	9.5	29
23	Cranberry Flavonoids Modulate Cariogenic Properties of Mixed-Species Biofilm through Exopolysaccharides-Matrix Disruption. <i>PLoS ONE</i> , <b>2015</b> , 10, e0145844	3.7	28
22	Dual-Targeting Approach Degrades Biofilm Matrix and Enhances Bacterial Killing. <i>Journal of Dental Research</i> , <b>2019</b> , 98, 322-330	8.1	23
21	Analysis of the adhesion of <i>Pseudomonas putida</i> NCIB 9816-4 to a silica gel as a model soil using extended DLVO theory. <i>Journal of Hazardous Materials</i> , <b>2010</b> , 179, 983-8	12.8	20
20	Adhesion of <i>Pseudomonas putida</i> NCIB 9816-4 to a naphthalene-contaminated soil. <i>Colloids and Surfaces B: Biointerfaces</i> , <b>2008</b> , 62, 91-6	6	12
19	and Impact Cell Envelope Biogenesis, the Biofilm Matrix, and Biofilm Biophysical Properties. <i>Journal of Bacteriology</i> , <b>2019</b> , 201,	3.5	12
18	Application of the extended DLVO approach to mechanistically study the algal flocculation. <i>Journal of Industrial and Engineering Chemistry</i> , <b>2015</b> , 30, 289-294	6.3	11

17	Determination of reliable Lewis acid-Base surface tension components of a solid in LWAB approach. <i>Journal of Industrial and Engineering Chemistry</i> , <b>2011</b> , 17, 125-129	6.3	11
16	Anti-biofilm activity of a novel pit and fissure self-adhesive sealant modified with metallic monomers. <i>Biofouling</i> , <b>2020</b> , 36, 245-255	3.3	10
15	New Selection Criterion for a Base Polar Liquid in the Lifshitz-van der Waals/Lewis Acid-Base Approach. <i>Journal of Physical Chemistry C</i> , <b>2011</b> , 115, 12458-12463	3.8	10
14	Influence of naphthalene biodegradation on the adhesion of <i>Pseudomonas putida</i> NCIB 9816-4 to a naphthalene-contaminated soil. <i>Journal of Hazardous Materials</i> , <b>2009</b> , 172, 491-3	12.8	10
13	Human Oral Motion-Powered Smart Dental Implant (SDI) for In Situ Ambulatory Photo-biomodulation Therapy. <i>Advanced Healthcare Materials</i> , <b>2020</b> , 9, e2000658	10.1	9
12	Cross-Kingdom Cell-to-Cell Interactions in Cariogenic Biofilm Initiation. <i>Journal of Dental Research</i> , <b>2021</b> , 100, 74-81	8.1	8
11	Synergism of and Reinforces Biofilm Maturation and Acidogenicity in Saliva: An Study. <i>Frontiers in Cellular and Infection Microbiology</i> , <b>2020</b> , 10, 623980	5.9	8
10	Bimodal Nanocomposite Platform with Antibiofilm and Self-Powering Functionalities for Biomedical Applications. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2021</b> , 13, 40379-40391	9.5	5
9	Physico-Chemical Processes. <i>Water Environment Research</i> , <b>2011</b> , 83, 994-1091	2.8	4
8	Physico-Chemical Processes. <i>Water Environment Research</i> , <b>2012</b> , 84, 971-1028	2.8	3
7	Nanomaterials Properties of Environmental Interest and How to Assess Them <b>2019</b> , 45-105		2
6	Biological Fixed Film. <i>Water Environment Research</i> , <b>2012</b> , 84, 1081-1113	2.8	2
5	A Comprehensive Analysis of Near-Contact Photobiomodulation Therapy in the Host-Bacteria Interaction Model Using 3D-Printed Modular LED Platform. <i>Advanced Biology</i> , <b>2020</b> , 4, e1900227	3.5	2
4	Intervening in Symbiotic Cross-Kingdom Biofilm Interactions: a Binding Mechanism-Based Nonmicrobicidal Approach. <i>MBio</i> , <b>2021</b> , 12,	7.8	1
3	Smart Tooth System for In-Situ Wireless PH Monitoring <b>2021</b> ,		1
2	Diagnosis of Biofilm-Associated Peri-Implant Disease Using a Fluorescence-Based Approach. <i>Dentistry Journal</i> , <b>2021</b> , 9,	3.1	1
1	A 3D-Printed Customizable Platform for Multiplex Dynamic Biofilm Studies. <i>Advanced Materials Technologies</i> , 2200138	6.8	0