


# CURRICULUM VITAE

<b>Family Name</b>	CHOI	<b>Given Name</b>	GOEUN	
<b>Nationality</b>	Republic of Korea	<b>Date of Birth</b>	September 18, 1983	
<b>Gender</b>	Female	<b>Family Relationship</b>	Single	
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<b>Position</b>	Invited Professor NRF Research Fellow	<b>Tel. (Office)</b>	+82-41-529-6047	
<b>Address (Office)</b>	Intelligent Nanohybrid Materials Laboratory (INML), Institute of Tissue Regeneration Engineering (ITREN), Dankook University, 119, Dandae-ro, Dongnam-gu, Cheonan-si, Chungnam, 31116, Korea			
<b>Major GPA</b>	<b>B.S.</b> 4.11 / 4.50 <b>M.S.</b> 4.21 / 4.30 [4.41 / 4.50] <b>Ph.D.</b> 4.30 / 4.30 [4.50 / 4.50]			
<b>■ EDUCATION</b>				
Mar. 2004 – Aug. 2007	<b>B.S.</b> Department of Chemistry, Sangmyung University, Korea			
Mar. 2008 – Feb. 2010	<b>M.S.</b> Department of Chemistry and Nano Science, Ewha Womans University, Korea • Supervisor: Prof. Jin-Ho Choy • Thesis Title: <i>Layered Double Hydroxides (LDHs) – Drug Nanohybrids for Drug Delivery</i>			
Mar. 2012 – Feb. 2016	<b>Ph.D.</b> Department of Chemistry and Nano Science, Ewha Womans University, Korea • Supervisor: Prof. Jin-Ho Choy • Thesis Title: <i>Layered Double Hydroxide as Injectable Drug Delivery Nanovehicle with Targeting Function</i>			
<b>■ PROFESSIONAL ACTIVITY</b>				
Oct. 2018 – Present	<b>Invited Professor</b> Intelligent Nanohybrid Materials Laboratory (INML), Institute of Tissue Regeneration Engineering (ITREN), Dankook University, Korea.			
June 2017 – Sep. 2018	<b>Research Professor, NRF Research Fellow</b> Distinguished Prof. Jin-Ho Choy's Group Center for Nano-Bio Materials (CINBM), Department of Chemistry and Nano Sciences (BK21 PLUS), Ewha Womans University, Korea.			
Mar. 2017 – May 2017	<b>Visiting Postdoctoral Fellow</b> Prof. Ajayan Vinu's Group Future Industries Institute (FII), University of South Australia, Mawson Lakes, Adelaide SA, Australia.			

Mar. 2016 – May 2017	<b>Research Associate</b> Distinguished Prof. Jin-Ho Choy's Group Center for Nano-Bio Materials (CINBM), Department of Chemistry and Nano Sciences (BK21 PLUS), Ewha Womans University, Korea.
2016 – Present	<b>Permanent member</b> , Korean Chemical Society, Korea.
May 2011 – Feb. 2012	<b>Researcher</b> , Center for Nano-Bio Materials (CINBM), Department of Chemistry and Nano Sciences, Ewha Womans University, Korea.
Mar. 2010 – Feb. 2011	<b>Researcher</b> , Department of Chemistry, College of Science, Yonsei University, Seoul, Korea.
Mar. 2010 – Aug. 2010	<b>Teaching Assistant</b> , Department of Chemistry, College of Science, Yonsei University, Seoul, Korea.
<b>■ AWARD</b>	
1	Mar. 2008 – Feb. 2010 <b>Brain Korea 21 (BK21) Fellowship</b> , The Ministry of Education, Korea.
2	Jul. 2008 <b>Certificate of Completion</b> , Global Joint Education Program 2008, Kumamoto University, Japan.
3	Mar. 2010 – Feb. 2011 <b>The Hi-Seoul Scholarship for Graduate Student</b> , Seoul City, Korea.
4	May 2012 <b>The Best Poster Presentation Award</b> , European Materials Research Society (E-MRS) Spring Meeting, Strasbourg, France, Poster presentation in Symposium P 'Advanced Hybrid Materials II: design and applications' session.
5	2012 – 2015 <b>Solvay Scholarship for Graduate Student</b> , Solvay, Korea.
6	Sep. 2012 <b>The Best Poster Presentation Award</b> , 2 <sup>nd</sup> Asian Clay Conference, Seoul, Korea.
7	Jan. 2013 <b>First Prize for Poster Presentation</b> , Second International Workshop on Advanced Functional Nanomaterials (SIWAN-2013), Chennai, India.
8	Jul. 2014 <b>The Best Poster Presentation Award</b> , Korean Clay Science Symposium 2014, Wonju, Gangwondo, Korea.
9	Apr. 2015 <b>The Best Poster Presentation Award</b> , Korean Chemical Society (KCS), Korea.
10	Nov. 2015 <b>The Best Poster Presentation Award</b> , Korean Ceramic Society, Korea.
11	Feb. 2016 <b>A Prize for Excellent Ph. D. Thesis</b> , Ewha Womans University, Korea.
12	Oct. 2016 <b>A Prize for Excellent Ph. D. Thesis</b> , Korean Chemical Society (KCS), Korea.
13	Feb. 2017 <b>Best Oral Presentation Award</b> , Pure and Applied Chemistry International Conference 2017 (PACCON 2017), Bangkok, Thailand.
14	Sep. 2017 <b>First Prize for Poster Presentation</b> , 2nd Global Congress & Expo on Materials Science and Nanoscience, Valencia, Spain.
15	Nov. 2017 <b>Award for Encouragement of Research in IUMRS-ICAM 2017</b> , The 15th International Conference on Advanced Materials (IUMRS-ICAM 2017), Kyoto, Japan.
16	Nov. 2017 <b>The Best Poster Presentation Award</b> , The 9th Young Researcher's BNCT Meeting, Kyoto, Japan.

## ■ PUBLICATIONS

### ► Refereed Journal Articles

- Total Number of Articles : 30
- Total Number of Citations : 420 (Source: Google Scholar)

### □ First author & Corresponding author : 12 Articles

- [1] **Goeun Choi**, Ji-Hee Lee, Yeon-Ji Oh, Young Bin Choy, Myung Chul Park, Hee Chul Chang, Jin-Ho Choy, “Inorganic-Polymer Nanohybrid Carrier for Delivery of a Poorly-Soluble Drug, Ursodeoxycholic Acid”, *Int. J. Pharm.* 402 (2010) 117–122. [I.F: 4.213]
- [2] Ji-Hee Lee\*, **Goeun Choi**\*, Yeon-Ji Oh, Je Won Park, Young Bin Choy, Myung Chul Park, Yeo Joon Yoon, Hwa Jeong Lee, Hee Chul Chang, Jin-Ho Choy, “A Nanohybrid System for Taste Masking of Sildenafil”, *Int. J. Nanomed.* 7 (2012) 1635–1649. \*equally contributed. [I.F: 4.471]
- [3] **Goeun Choi**, Su Yeon Kim, Jae-Min Oh, Jin-Ho Choy, “Drug-Ceramic 2-Dimensional Nanoassemblies for Drug Delivery System in Physiological Condition”, *J. Am. Ceram. Soc.* 95 (2012) 2758–2765. [I.F: 3.094]
- [4] **Goeun Choi**, Oh-Joon Kwon, Yeonji Oh, Chae-Ok Yun, Jin-Ho Choy, “Inorganic Nanovehicle Targets Tumor in an Orthotopic Breast Cancer Model”, *Sci. Rep.* [Nature Publishing Group], (2014) 4, 4430; DOI:10.1038/srep04430. [I.F: 4.011]
- [5] **Goeun Choi**, Jae-Hun Yang, Ga-Young Park, Ajayan Vinu, Ahmad Elzatahry, Chul Hyun Yo, Jin-Ho Choy, “Intercalative Ion-Exchange Route to Amino Acid Layered Double Hydroxide Nanohybrids and Their Sorption Properties”, *Eur. J. Inorg. Chem.* (2015) 925–930. [I.F: 2.578] **Cover Paper.**
- [6] **Goeun Choi**, Huiyan Piao, Zeid A. Alothman, Ajayan Vinu, Chae-Ok Yun, Jin-Ho Choy, “Anionic Clay as the Drug Delivery Vehicle: Tumor Targeting Function of LDH-MTX Nanohybrid in C33A Orthotopic Cervical Cancer Model”, *Int. J. Nanomed.* 11 (2016) 337–348. [I.F: 4.471]
- [7] **Goeun Choi**, Huiyan Piao, Myung Hun Kim, Jin-Ho Choy, “Enabling Nanohybrid Drug Discovery through the Soft Chemistry Telescope”, *Ind. Eng. Chem. Res.* [ACS], 55 (2016) 11211–11224. [I.F: 3.375] **Invited Paper.**  
**The Best Presentation in the 2016 ACS Spring National Meeting in San Diego, CA, USA.**
- [8] Kanakappan Mickel Ansy, Ji-Hee Lee, Huiyan Piao, **Goeun Choi**\*, Jin-Ho Choy\*, “Stabilization of antioxidant gallate in layered double hydroxide by exfoliation and reassembling reaction”, *Solid State Sci.* 80 (2018) 65–71. (\*Corresponding authors) [I.F: 2.155]
- [9] **Goeun Choi**, Sairan Eom, Ajayan Vinu, Jin-Ho Choy, “2D Nanostructured Metal Hydroxides with Gene Delivery and Theranostic Functions; A Comprehensive Review”, *Chem. Rec.* 18 (2018) 1–22. [I.F: 5.387]
- [10] **Goeun Choi**, Ie-Rang Jeon, Huiyan Piao, Jin-Ho Choy, “Highly Condensed Boron Cage Cluster Anions in 2D Carrier and its Enhanced Antitumor Efficiency for Boron Neutron Capture Therapy”, *Adv. Funct. Mater.* 28 (2018) 1704470. [I.F: 15.621] **Front Cover Paper.**

[11] **Goeun Choi**, Tae-Hyun Kim, Jae-Min Oh, Jin-Ho Choy, “Emerging Nanomaterials with Advanced Drug Delivery Functions; Focused on Methotrexate Delivery”, *Coord. Chem. Rev.* 359 (2018) 32–51. [I.F: 13.476]

[12] **Goeun Choi**, Huiyan Piao, Sairan Eom, Jin-Ho Choy, “Vectorized Clay Nanoparticles in Therapy and Diagnosis”, *Clay Clay Min.* 67 (2019) 25–43. [I.F: 1.835]

❑ **Coauthor: 18 Articles**

[1] Soo-Jin Choi, **Go Eun Choi**, Jae-Min Oh, Yeon-Ji Oh, Myung-Chul Park, Jin-Ho Choy, “Anticancer Drug Encapsulated in Inorganic Lattice Can Overcome Drug Resistance”, *J. Mater. Chem.* 20 (2010) 9463–9469. [I.F: 6.626]

[2] Yeon-Ji Oh, **Goeun Choi**, Young Bin Choy, Je Won Park, Jung Hyun Park, Hwa Jeong Lee, Yeo Joon Yoon, Hee Chul Chang, Jin-Ho Choy, “Aripiprazole-Montmorillonite: A New Organic–Inorganic Nanohybrid Material for Biomedical Applications”, *Chem. -Eur. J.* 19 (2013) 4869–4875. [I.F: 5.160]

[3] Won Cho, Hee Jung Lee, **Goeun Choi**, Sora Choi, Moonhyun Oh, “Dual Changes in Conformation and Optical Properties of Fluorophores within a Metal–Organic Framework During Framework Construction and Associated Sensing Event”, *J. Am. Chem. Soc.* 136 (2014) 12201–12204. [I.F: 14.695]

[4] Dae-Hwan Park, **Goeun Choi**, Jin-Ho Choy, “Chap 4. Bio-layered double hydroxides nanohybrids for theranostics applications, Photofunctional layered materials”, *Struct. Bond.* [Springer] 166 (2015) 137–175. [I.F: 2.721]

[5] Lichao Jia, Geoffrey Lawrence, V.V. Balasubramanian, **Goeun Choi**, Jin-Ho Choy, Aboubakr M.A. Ali, Ahmad Elzatahry, Katsuhiko Ariga, Ajayan Vinu, “Highly Ordered Nanoporous Carbon Films with Tunable Pore Diameters and their Excellent Sensing Properties”, *Chem. -Eur. J.* 21 (2015) 697–703. [I.F: 5.160]

[6] Heemin Kang, Hyoung-Jun Kim, Jae-Hun Yang, Tae-Hyun Kim, **Goeun Choi**, Seung-Min Paek, Ae-Jin Choi, Jin-Ho Choy, Jae-Min Oh, “Intracrystalline Structure and Release Pattern of Ferulic Acid Intercalated into Layered Double Hydroxide Through Various Synthesis Routes”, *Appl. Clay Sci.* 112–113 (2015) 32–39. [I.F: 3.890]

[7] Ji-Yeong Kim, Jae-Hun Yang, Ji-Hee Lee, **Goeun Choi**, Dae-Hwan Park, Mi-rea Jo, Soo-Jin Choi, Jin-Ho Choy, “2D Inorganic-Antimalaria Drug-Polymer Hybrid with pH-responsive Solubility”, *Chem. -Asian J.* 10 (2015) 2264–2271. [I.F: 3.698] **Cover Paper & Very Important Paper.**

[8] Myung Hun Kim, **Goeun Choi**, Ahmad Elzatahry, Ajayan Vinu, Young Bin Choy, Jin-Ho Choy, “Review of Clay-Drug Hybrid Materials for Biomedical Applications: Administration Routes”, *Clay Clay Min.* 64 (2016) 115–130. [I.F: 1.835]

[9] Myung Hun Kim, Woojune Hur, **Goeun Choi**, Hye Sook Min, Tae Hyun Choi, Young Bin Choy, Jin-Ho Choy, “Theranostic Bioabsorbable Bone Fixation Plate with Drug-Layered Double Hydroxide Nanohybrids”, *Adv. Healthc. Mater.* 5 (2016) 2765–2775. [I.F: 6.270] **Cover Paper.**

[10] Seon Sook Lee, **Goeun Choi**, Hyun Jung Lee, Yelin Kim, Jin-Ho Choy, Byeongmoon Jeong, “Layered Double Hydroxide and Polypeptide Thermogel Nanocomposite System for Chondrogenic Differentiation of Stem Cells”, *ACS Appl. Mater. Interfaces* 9 (2017) 42668–42675. [I.F: 8.456]

- [11] Jae-Hun Yang, Yi-Rong Pei, Seung-Joo Kim, **Goeun Choi**, Ajayan Vinu, Jin-Ho Choy, “Highly Enhanced Photocatalytic Water-Splitting Activity of Gallium Zinc Oxynitride Derived from Flux-Assisted Zn/Ga Layered Double Hydroxides”, *Ind. Eng. Chem. Res.* [ACS], 57 (2018) 16264–16271. [I.F: 3.375]
- [12] Min-Ju Choi, Ji-Ho Eom, Sung-Ho Shin, Junghyo Nah, Jin-Seok Choi, Hyun-A. Song, Hyesung An, Hyun You Kim, S.V.N. Pammi, **Goeun Choi**, Jin-Ho Choy, Ippili Swathi, Venkatraju Jella, Byeong-Ju Park, Jihoon Choi, Soon-Gil Yoon, “Most Facile Synthesis of Zn-Al:LDHs Nanosheets at Room Temperature via Environmentally Friendly Process and Their High Power Generation by Flexoelectricity”, *Materials Today Energy* 10 (2018) 254–263.
- [13] Huiyan Piao, Myung Hun Kim, Meiling Cui, **Goeun Choi**, Jin-Ho Choy, “Alendronate-Anionic Clay Nanohybrid for Enhanced Osteogenic Proliferation and Differentiation”, *J. Korean Med. Sci.* 34 (2019) e37. [I.F: 1.716]
- [14] Yi-Rong Pei, **Goeun Choi**, Shunsuke Asahina, Jae-Hun Yang, Ajayan Vinu, Jin-Ho Choy, “A Novel Geopolymer Route to Porous Carbon: High CO<sub>2</sub> Adsorption Capacity”, *Chem. Commun.* 55 (2019) 3266–3269. [I.F: 6.614]
- [15] Sairan Eom, **Goeun Choi**, Jin-Ho Choy, “Y(III) Ion Substituted 2D Anionic Clay (I); in-vitro Cytotoxicity and Intercellular Uptake Behavior”, *Appl. Clay Sci.* 176 (2019) 58–65. [I.F: 3.890]
- [16] Seung Ho Lee, Huiyan Piao, Yong Chan Cho, Se-Na Kim, **Goeun Choi**, Cho Rim Kim, Han Bi Ji, Chun Gwon Park, Cheol Lee, Chong In Shin, Won-Gun Koh, Young Bin Choy, Jin-Ho Choy, “Implantable Multi-reservoir Device with Stimulus-responsive Membrane for On-demand and Pulsatile Delivery of Growth Hormone”, *Proc. Natl. Acad. Sci. USA* (2019) Proceedings of the National Academy of Sciences of the United States of America, 116, 11664-11672. [I.F: 9.580]
- [17] Ji-Hee Lee, Wei Zhang, Hyeon-Ju Ryu, **Goeun Choi**, J. Yoon Choi, Jin-Ho Choy, “Enhanced Thermal Stability and Mechanical Property of EVA Nanocomposites upon Addition of Organo-intercalated LDH Nanoparticles”, *Polymer* 177 (2019) 274-281.  
[I.F: 3.771]  
Top 15% in POLYMER SCIENCE
- [18] Taehwan Jeong, Huiyan Piao, Sangwoo Park, Jae-Hun Yang, **Goeun Choi**, Qinke Wu, Hyun Min Kang, Hwi Je Woo, Seong Jun Jung, Hanchul Kim, Bong Gyu Shin, Youngkuk Kim, Euy Heon Hwang, Jin-Ho Choy, Young Jae Song, “Atomic and Electronic Structures of Graphene-decorated Graphitic Carbon Nitride (g-C<sub>3</sub>N<sub>4</sub>) as a Metal-free Photocatalyst under Visible-light”, *Applied Catalysis B: Environmental*, 256 (2019) 117850.  
[I.F: 14.229] Top 2% in ENGINEERING, ENVIRONMENTAL

#### ► Book Chapters

- [1] Dae-Hwan Park, **Goeun Choi**, Jin-Ho Choy, “Chap 4. Bio-layered double hydroxides nanohybrids for theranostics applications, Photofunctional layered materials”, *Struct. Bond.* [Springer] 166 (2015) 137–175. [I.F: 2.721]
- [2] **Goeun Choi**, Huiyan Piao, Sairan Eom, Jin-Ho Choy, “Vectorized Clay Nanoparticles to the Therapy and Diagnosis”, *55<sup>th</sup> Annual Meeting of the Clay Minerals Society*. Workshop Lecture Series (2019) *Clay Clay Min.* 67 (2019) 25–43. [I.F: 1.835]

## ► Patents

- [1] **Goeun Choi**, Jin-Ho Choy, Myung Chul Park, Hee Chul Chang, “Ursodesoxycholic acid-synthetic hydrotalcite-Eudragit hybrid, pharmaceutical composition containing the same and method for preparing the same”
  - Republic of Korea Patent Application No. **10-2009-0086149** (11 September **2009**).
  - Patent Cooperation Treaty, **PCT-KR2010-006192** (10 September **2010**).
  - Republic of Korea Patent Registration No. **10-1636958-0000** (30 June **2016**).
- [2] **Goeun Choi**, Jin-Ho Choy, Jaeyoung Hur, “Layered inorganic Nanomaterial, preparing method of the same, and food supplement including the same”
  - Republic of Korea Patent Application No. **10-2015-0007774** (16 January **2015**).
  - Patent Cooperation Treaty, **PCT-KR2015-000473** (16 January **2015**).
  - Republic of Korea Patent Registration No. **10-1758611-0000** (11 July **2017**).
- [3] **Goeun Choi**, Jin-Ho Choy, Dae-Hwan Park, Ho-Jun Kim, “Inorganic polymer hybrid colloid compound and method for preparing the same”
  - Republic of Korea Patent Application No. **10-2015-0039265** (20 March **2015**).
  - Patent Cooperation Treaty, **PCT-KR2016-002757** (18 March **2016**).
- [4] **Goeun Choi**, Jin-Ho Choy, Youn-Jin Kim, Ji-Yeong kim, “Polymer coated drug-inorganic hydroxide hybrid with enhanced bioavailability, a preparation method thereof and drug carrier comprising the same”
  - Republic of Korea Patent Application No. **10-2015-0083513** (12 June **2015**).
- [5] **Goeun Choi**, Jin-Ho Choy, Youn-Jin Kim, Ji-Yeong kim, “Oral composition comprising drug-inorganic hybrid with enhanced bioavailability”
  - Republic of Korea Patent Application No. **10-2015-0110190** (4 August **2015**).
- [6] **Goeun Choi**, Jin-Ho Choy, Sairan Eom, “Radioisotope-containing metal layered double hydroxide composite, preparing method of the same, and uses of the same”
  - Republic of Korea Patent Application No. **10-2018-0016257** (9 February **2018**).
- [7] **Goeun Choi**, Jin-Ho Choy, Huiyan Piao, “Carbon nitride-nanoclay composite, method for preparing the same, and UV blocking agent including the same”
  - Republic of Korea Patent Application No. **10-2018-0044596** (17 April **2018**).
- [8] **Goeun Choi**, Jin-Ho Choy, Huiyan Piao, “Carbon nitride monolayer nanosheet and method for preparing the same”
  - Republic of Korea Patent Application No. **10-2018-0044621** (17 April **2018**).

## ■ RESEARCH INTERESTS

- [1] Development of organic-inorganic, inorganic-inorganic and bio-inorganic nanohybrid materials and their applications towards nanomedicine including drug delivery systems for chemo-, gene-, and radiation therapies, and bio-imaging and diagnostic systems.
- [2] Synthesis of bio-nanohybrid materials with heterostructure
- [3] Exploration of 2-dimensional materials via intercalative soft chemistry
- [4] Designing multimodal nanohybrid materials with theranostic functions
- [5] Exploring novel boron delivery systems for Boron Neutron Capture Therapy (BNCT)
- [6] Developing biocompatible metal and semiconductor nanoparticles for photothermal and photodynamic therapies