

EDUCATION	The University of Chicago, Chicago, IL	07,2013-08,2016
	Ph.D. Chemistry Advisor: Wenbin Lin	
	<ul style="list-style-type: none">Moved with advisor for the continuation of Ph.D. program	
	University of North Carolina at Chapel Hill, Chapel Hill, NC	08,2011-06,2013
	Ph.D. Chemistry Advisor: Wenbin Lin	
	<ul style="list-style-type: none">Research Mentoring Certificate, Wisconsin Program for Scientific Teaching, 2013	
	University of Washington, Seattle, WA	08,2006-06,2011
	<ul style="list-style-type: none">B.S. in ACS Certified Chemistry and BiochemistryDean's List for 8 quartersHyperCube Scholar Award, University of Washington, 2010	

RESEARCH EXPERIENCE	University of Southern California, Los Angeles, CA	09,2016-Present
	<i>Postdoctoral Scholar</i>	
	Development of peptide amphiphile micelles to deliver nucleic acid and small molecule therapeutics for the diagnostics and treatment of atherosclerosis and cancers. This experience involved the synthesis and characterization of peptide-based nanoparticles and the evaluation of biocompatibility in <i>in vitro</i> and <i>in vivo</i> models. I mentor two undergraduates in micelle synthesis and characterizations, while maintaining and training new users on high performance liquid chromatography mass spectrometer (HPLC), lyophilizer, cell culturing in the lab.	
	The University of Chicago, Chicago, IL	08,2013-08,2016
	<i>Research Assistant</i>	
	University of North Carolina at Chapel Hill, Chapel Hill, NC	08,2011-07,2013
	<i>Research Assistant</i>	
	Nanoparticle development to deliver multiple small molecule chemotherapeutics. This included designing and synthesizing basic organic ligands and inorganic metal complexes for the construction of several formulation of nanoparticles, applying analytical techniques for nanoparticle characterization, evaluating <i>in vitro</i> cytotoxicity, and synergistic ability of the nanoparticle in various cancer cell lines, and assessing <i>in vivo</i> anticancer efficacy of these nanoparticle on multiple tumor models to increase progression-free survival benefits and reduce toxicity. This experience led to involvement with multidisciplinary collaborators in the School of Medicine for the usage of these nanoparticles in their metastatic tumor model systems. I mentored two undergraduates in optimizing nanoparticle synthesis processes and characterizations. Finally, I also manage the inductively-coupled plasma mass spectrometer (ICP-MS) in the chemistry facility core. Part of the task includes training new users, developing new strategy ideal for their sample analysis, running samples for other users, and performing weekly maintenance to the instrument.	
	University of Washington, Seattle, WA	06,2009-06,2011
	<i>Undergraduate Researcher</i>	
	Developed computational approach to the discovery of putative substrates of ubiquitin ligases. Collaborated with mathematician and engineer on simplifying molecular protein-protein interaction using Gaussian modeling software and Perl scripting.	

TEACHING EXPERIENCE	University of North Carolina at Chapel Hill, Chapel Hill, NC	08,2011-08,2012
	<i>Teaching Assistant, Department of Chemistry</i>	

Developed basic chemical skill sets for undergraduates that were first-time exposed to chemistry. Prepared lecture materials and review session for introductory chemistry to undergraduates in lab and supplementary sessions. Graded for introductory chemistry and organic chemistry.

University of Washington, Seattle, WA

Teaching Assistant, Department of Chemistry

08,2010-06,2011

Prepared lecture and lab materials, review sessions, and exams for introductory chemistry to undergraduates

AREAS OF EXPERTISE

- Nanoparticle formulation and characterization for drug delivery
- Method development for mass spectrometry
- Cell culture techniques and analysis

TECHNICAL SKILLS

- *Electron microscopy*: Transmission electron microscope (TEM) and Scanning electron microscope (SEM)
- *Mass spectrometry technique*: Inductively coupled plasma-mass spectrometer (ICP-MS), Liquid chromatography tandem mass spectrometer (LC-MS/MS), High resolution mass spectrometer (HR-MS), and Matrix-assisted laser desorption/ionization time of flight mass spectrometer (MALDI)
- *Cell culturing technique*: Flow cytometer, Confocal Microscopy, Real-time polymerase chain reaction (RT-PCR), Enzyme-linked immunosorbent assay, (ELISA), Gel electrophoresis, and various cytotoxicity assays
- *Animal studies*: Maximum tolerated dose determination, pharmacokinetics, biodistribution, and anticancer efficacy on mice carrying various tumor models
- *Synthesis*: Microwave reactor for solvothermal, surfactant-assisted and reverse microemulsion reactions, Peptide synthesizer for Fmoc-mediated solid-phase peptide synthesis methods
- *Other characterization technique*: Nuclear magnetic resonance spectrometer (NMR), Dynamic light scattering analyzer (DLS), Thermogravimetric Analyzer (TGA), Ultraviolet visible spectrophotometer (UV-Vis), Fluorometer, Circular Dichroism (CD) spectrometer
- *Organic synthesis*: Lipid conjugation, prodrug, organic ligands and metal complexes for construction of nanoparticle
- *Lyophilization techniques*: Operate bench top freeze dryer to lyophilize nanoparticles for long-term stability and storage
- *Computational*: Proficiency in SAS/SAS macro, Perl scripting, QM/MM calculations (Gaussian 09), Origin, ChemDraw, EndNote, excel, Adobe Illustrator, and Adobe Photoshop

PUBLICATIONS

11. *In vivo delivery and therapeutic effects of a microRNA on colorectal liver metastases*. G. Oshima, N. Go, C. He, M.E. Stack, **C. Poon**, A. Uppal, S.C. Wightman, A. Parekh, K.B. Skowron, M.C. Posner, W. Lin, N.N. Khodarev, R.R. Weichselbaum. *In Preparation*.
 10. *Targeting cell adhesion molecules with nanoparticles using in vivo and flow-based in vitro models of atherosclerosis*. K. Khodabandehlou†, J.J. Masehi-Lano†, **C. Poon**†, J. Wang, E.J. Chung, *Exp Biol Med*, *In press*. († co-first author)
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9. *Gadolinium-functionalized peptide amphiphile micelles for multimodal imaging of atherosclerotic lesions*. S.P. Yoo, F. Pineda, J. Barrett, **C. Poon**, M. Tirrell, E.J. Chung, *ACS Omega*, **1**, 996-1003 (2016).
8. *Nanoscale coordination polymers with high payloads of carboplatin and gemcitabine for synergistic combination treatment of platinum-resistant ovarian cancer*. **C. Poon**[†], X. Duan[†], C. Chan, W. Han, W. Lin, *Mol Pharm*, **13**, 3665-3675 (2016). ([†] co-first author)
7. *Core-shell nanoscale coordination polymers combine chemotherapy and photodynamic therapy to potentiate checkpoint blockade cancer immunotherapy*. C. He, X. Duan, N. Guo, C. Chan, **C. Poon**, R.R. Weichselbaum, W. Lin. *Nat Comm*, **7**, 12499 (2016).
6. *Nanoscale coordination polymers co-deliver chemotherapeutics and siRNAs to eradicate tumors of cisplatin-resistant ovarian cancer*. C. He, **C. Poon**, C. Chan, S.D. Yamada, W. Lin. *J Am Chem Soc*, **138**, 6010-6019 (2016).
5. *Graphene-immobilized fac-Re(bipy)(CO)₃Cl for syngas generation from carbon dioxide*. X. Zhou, D. Micheroni, Z. Lin, **C. Poon**, Z. Li, W. Lin. *ACS Appl Mater Interfaces*, **8**, 4192-4198 (2016).
4. *Self-assembled nanoscale coordination polymers carrying oxaliplatin and gemcitabine for synergistic combination therapy of pancreatic cancer*. **C. Poon**, C. He, D. Liu, K. Lu, W. Lin. *J Control Release*, **201**, 90-99 (2015).
3. *Self-assembled nanoscale coordination polymers with trigger release properties for effective anticancer therapy*. D. Liu, **C. Poon**, K. Lu, C. He, W. Lin. *Nat Comm*, **5**, 4182 (2014).
2. *Theranostic nanoscale coordination polymers for magnetic resonance imaging and bisphosphonate delivery*. D. Liu, C. He, **C. Poon**, W. Lin, *J Mater Chem B*, **2**, 8249-8255 (2014).
1. *Metal-organic frameworks as sensory materials and imaging agents*. D. Liu, K. Lu, **C. Poon**, W. Lin. *Inorg Chem*, 2014, **53**, 1916-1924 (2014).

PRESENTATIONS

3. University of Chicago Science & Engineering Industrial Affiliates Day, Chicago, IL, 2015
Self-assembled Nanoscale Coordination Polymers Carrying siRNAs and Cisplatin for Effective Treatment of Resistant Ovarian Cancers
2. National Cancer Institute (NCI) Site Visit meeting in Carolina Center of Cancer Nanotechnology Excellence (CCNE), Chapel Hill, NC, 2013
Nanoscale Coordination Polymers for Anticancer Drug Delivery
1. Third Annual Investigators Meeting of the Phase II Alliance for Nanotechnology in Cancer (ANC), Houston, TX, 2012
Nanoscale Coordination Polymers for Anticancer Drug Delivery

PATENTS

U.S. Patent 61/505, 806, July 8, 2011
Title: Metal Bisphosphonate Nanoparticles for Anti-cancer Therapy and Imaging and for Treating Bone Disorders

LEADERSHIP EXPERIENCE

Phi Lambda Upsilon, University of Washington, Seattle, WA
Vice President

06,2010-08,2011

- National Chemistry Honor Society to promote high scholarship and original investigation in applied chemistry
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Christopher Poon, Ph.D.

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- Arrange social and academic outreach events around the community

