Stanford

Zhonglin Lyu

Postdoctoral Research Fellow, Neurosurgery

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BIO

Dr. Lyu is a postdoctoral scholar in the Department of Neurosurgery at Stanford University. He obtained his PhD at Soochow University, China, where he gained training in Biomedical Engineering and led multidisciplinary research under the advice of Prof. Hong Chen. During his PhD, he worked as a visiting student researcher at Canary Center at Stanford for Early Cancer Detection where he gained training in microfluidics and cancer metastasis.

Under the guidance of Prof. Jon Park and Dr. Wonjae Lee, the overall goal of Dr. Lyu's research is to develop an in vitro stroke model and use it as a platform to look for stem cell therapy for stroke treatment.

PROFESSIONAL EDUCATION

- Doctor of Philosophy, Soochow University , Biomedical Engineering (2017)

Publications

PUBLICATIONS

- **Epithelial-to-Mesenchymal Transition (EMT) and Drug Response in Dynamic Bioengineered Lung Cancer Microenvironment** *ADVANCED BIOSYSTEMS*
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- **Sulfonate Groups and Saccharides as Essential Structural Elements in Heparin-Mimicking Polymers Used as Surface Modifiers: Optimization of Relative Contents for Antithrombogenic Properties** *ACS APPLIED MATERIALS & INTERFACES*
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- **Intracellular Delivery Platform for "Recalcitrant" Cells: When Polymeric Carrier Marries Photoporation** *ACS APPLIED MATERIALS & INTERFACES*
  Wu, J., Xue, H., Lyu, Z., Li, Z., Qu, Y., Xu, Y., Wang, L., Yu, Q., Chen, H.
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- **Synthetic Glycopolymers for Highly Efficient Differentiation of Embryonic Stem Cells into Neurons: Lipo- or Not?** *ACS APPLIED MATERIALS & INTERFACES*
  Liu, Q., Lyu, Z., Yu, Y., Zhao, Z., Hu, S., Yuan, L., Chen, G., Chen, H.
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- **Promoting neural differentiation of embryonic stem cells using beta-cyclodextrin sulfonate** *JOURNAL OF MATERIALS CHEMISTRY B*

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- **A hemocompatible polyurethane surface having dual fibrinolytic and nitric oxide generating functions** *JOURNAL OF MATERIALS CHEMISTRY B*
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- **Glycosaminoglycans (GAGs) and GAG mimetics regulate the behavior of stem cell differentiation** *COLLOIDS AND SURFACES B-BIOINTERFACES*
  Wang, M., Liu, X., Lyu, Z., Gu, H., Li, D., Chen, H.
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- **A Universal Platform for Macromolecular Delivery into Cells Using Gold Nanoparticle Layers via the Photoporation Effect** *ADVANCED FUNCTIONAL MATERIALS*
  Lyu, Z., Zhou, F., Liu, Q., Xue, H., Yu, Q., Chen, H.
  2016; 26 (32): 5787–95

- **Interactions of biomaterial surfaces with proteins and cells** *Polymeric Biomaterials for Tissue Regeneration*
  Lyu, Z., Yu, Q., Chen, H.
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- **Bioinspired Blood Compatible Surface Having Combined Fibrinolytic and Vascular Endothelium-Like Properties via a Sequential Coimmobilization Strategy** *ADVANCED FUNCTIONAL MATERIALS*
  Zhan, W., Shi, X., Yu, Q., Lyu, Z., Cao, L., Du, H., Liu, Q., Wang, X., Chen, G., Li, D., Brash, J. L., Chen, H.
  2015; 25 (32): 5206–13

- **A theranostic prodrug delivery system based on Pt(IV) conjugated nano-graphene oxide with synergistic effect to enhance the therapeutic efficacy of Pt drug** *BIOMATERIALS*
  Li, J., Lyv, Z., Li, Y., Liu, H., Wang, J., Zhan, W., Chen, H., Chen, H., Li, X.
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- **Efficient cancer cell capturing SiNWAs prepared via surface-initiated SET-LRP and click chemistry** *POLYMER CHEMISTRY*
  Xue, L., Lyu, Z., Luan, Y., Xiong, X., Pan, J., Chen, G., Chen, H.
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- **A new avenue to the synthesis of GAG-mimicking polymers highly promoting neural differentiation of embryonic stem cells** *CHEMICAL COMMUNICATIONS*
  Wang, M., Lyu, Z., Chen, G., Wang, H., Yuan, Y., Ding, K., Yu, Q., Yuan, L., Chen, H.
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- **6-O-Sulfated Chitosan Promoting the Neural Differentiation of Mouse Embryonic Stem Cells** *ACS APPLIED MATERIALS & INTERFACES*
  Ding, K., Wang, Y., Wang, H., Yuan, L., Tan, M., Shi, X., Lyu, Z., Liu, Y., Chen, H.
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- **Stimulation of Gene Transfection by Silicon Nanowire Arrays Modified with Polyethylenimine** *ACS APPLIED MATERIALS & INTERFACES*
  Pan, J., Lyu, Z., Jiang, W., Wang, H., Liu, Q., Tan, M., Yuan, L., Chen, H.
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- **Maintaining the pluripotency of mouse embryonic stem cells on gold nanoparticle layers with nanoscale but not microscale surface roughness** *NANOSCALE*
  Lyu, Z., Wang, H., Wang, Y., Ding, K., Liu, H., Yuan, L., Shi, X., Wang, M., Wang, Y., Chen, H.
  2014; 6 (12): 6959–69

- **Fast and green synthesis of smart glyco-surface via aqueous single electron transfer-living radical polymerization** *Macromolecular Chemistry Physics*
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- **Incorporation of tyrosine phosphate into tetraphenylethylene affords an amphiphilic molecule for alkaline phosphatase detection, hydrogelation and calcium mineralization** *JOURNAL OF MATERIALS CHEMISTRY B*

  Liu, H., Lv, Z., Ding, K., Liu, X., Yuan, L., Chen, H., Li, X.

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