
Tianran Zhang

Email: zhangtr1997@gmail.com; zhangtr@connect.hku.hk

Tel: +86 18002248853

Skype: zhangtianran1997

SUMMARY

Adept at design, synthesis and characterization of DNA origami and other DNA nanotechnology. Detail-orientated chemist with expertise in the field of inorganic materials. Excellent command of computer techniques and mathematical model building.

SKILLS

DNA origami design	PCR	AFM
Electrophoresis	XRD	DLS
Hydrothermal synthesis	Ion exchange synthesis	MATLAB
Mathematic model building	Cinema 4D (a 3D computer graphics program like 3D max)	OriginPro
CorelDraw	Website building	Python
Material Studio	Crystal structure refinement	COMSOL multiphysics

RESEARCH

EXPERIENCE

IN JLU

International Biomolecular Design Competition

■ University of California, San Francisco (Feb.2017-Nov.2017)

- Project: TMV-CP-capture nanocage based on DNA origami
- Supervisor: Prof. Shuwen Guan and Dr. Chunxi Hou
- Details: Designed DNA origami via Cadnano software, composed and co-authored the competition paper, studied and used techniques of DLS, PCR, AFM and others to synthesize and characterize our products, presented the detail and results of experiment with other group members and had an oral defense in UCSF.

National Undergraduate Training Programs for Innovation

■ State Key Lab of Inorganic Synthesis and Preparative Chemistry (Mar.2017-Mar.2018)

- Project: Adsorption Performance and Mechanism of Fluorine in Water
- Supervisor: Prof. Wenfu Yan
- Details: Supervised data collection through pH meter, Fluoride selective electrode and analyzed data with Origin Pro, Presented the detail and results of experiment with powerpoint in front of professors.

Research Assistance

■ State Key Lab of Inorganic Synthesis and Preparative Chemistry (Sep.2017-Mar.2018)

- Project: Application of Cationic Aluminoborate
- Supervisor: Prof. Wenfu Yan
- Details: Synthesized cationic aluminoborate, characterized cationic aluminoborate with XRD and its application on aquatic chromate

adsorption, modified cationic aluminoborate with different reagents to achieve certain functions, composed and co-authored the paper, drew cover picture for the paper. Made scientific illustrations, diagrams through Cinema 4D and Chimera

Image Recognition Algorithm

■ Mathematical Modelling Competition, Jilin Province (May.2018)

- Details: Led group to win silver price in the competition, used K-means algorithm, convolutional neuron network and self-developed algorithm to solve certain image recognition problem, coded in Matlab software to implement the image recognition.

Summer Break Internship

■ East China Normal University, Shanghai, China (Jul.2018)

- Project: DNA origami with new synthesis method
- Supervisor: Prof. Hao Pei
- Focus: DNA nanotechnology, enzyme treatment
- Assignment: Designing the required DNA origami with planar structure.

Exchange Program

■ Rutgers University, New Brunswick, N.J., U.S. (Aug.2018-Dec.2018)

- Project: Gold nanoparticle synthesis and etching
- Supervisor: Prof. Kibum Lee
- Detail: Etching bulk gold nanoparticles into smaller one with new method.

Junior Project

■ State Key Lab of Inorganic Synthesis and Preparative Chemistry (Feb.2019-Jun.2019)

- Project: High Removal Efficiency of Methyl Orange by Non-LDH Cationic Inorganic Layered Materials
- Supervisor: Prof. Wenfu Yan
- Details: Using a novel non-LDH cationic inorganic layered materials to remove methyl orange from aqueous solutions.

PUBLICATIONS

- Shuang Wang, Ruiyan Li, Yunan Qing, Yingzhen Wei, Qifei Wang, Tianran Zhang, Chang Sun, Yanguo Qin, Jihong Yu. DOI: 10.1016/j.inoche.2019.04.026, Inorganic Chemistry Communications, 2019, In Press.

- Tianran Zhang, Xiangzhi Zeng, Shuwen Guan, Xiumei Li, Zhiyu Qu, Luyao Qin, Chunxi Hou, Junqiu Liu. DOI: 10.1039/C9CC03109J, Chemical Communications, 2019, In Press.

- Tianran Zhang, Wenkai Wang, Pu Bai, Keyan Jin, Abigail Seo, Jihong Yu, Wenfu Yan. High Removal Efficiency of Methyl Orange by Non-LDH Cationic Inorganic Layered Materials, In Preparation.

EDUCATIONS

Jilin University (Sep.2015-Jul.2019)

- B.S. in chemistry
- Tang Aoqing Honors Program
- Ranking: 4/21

	<p>Rutgers University (Aug.2018-Dec.2018)</p> <ul style="list-style-type: none"> ● Exchange Program
	<p>University of Hong Kong (Sep.2019-present)</p>
AWARDS	<ul style="list-style-type: none"> ● Ph.D. in chemistry ● 1st Prize Scholarship, top 5% of all chemistry major in Jilin University (2016) ● 2nd place at the International Biomolecular Design Competition (2017) ● 2nd Prize Scholarship, top 20% of all chemistry major in Jilin University (2017) ● Recipient of the Elite Student Scholarship (2017) ● 2nd place at the Mathematical Modelling Competition, Jilin Province (2018) ● 3rd Prize Scholarship, top 40% of all chemistry major in Jilin University (2018)
CAMPUS	<p>Volunteer (Nov.2015)</p>
ACTIVITIES	<ul style="list-style-type: none"> ■ Volunteered to aid children in poverty <ul style="list-style-type: none"> ● Taught children in rural area of language and math. ● Took care of children on the autism spectrum. <p>Student Activities (Sep.2017)</p> <ul style="list-style-type: none"> ■ Worked as an assistance in a campaign of student union <ul style="list-style-type: none"> ● Worked in the campaign to encourage students' interest and ability in research ● Being a leading member of the campaign ● Drafted information on literature and other promotion materials for the campaign <p>Movie Making (Jun.2018)</p> <ul style="list-style-type: none"> ■ English Summer Camp in Jilin University <ul style="list-style-type: none"> ● Made an English micro-film with other group members. ● Worked on the effect of the movie and played a role in the movie.