

Xinju Dong

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EDUCATION

Ph.D. University of Louisville, Louisville, Kentucky 2018-present

Major: Chemistry

B.S. Western Kentucky University, Bowling Green, Kentucky 2014-2018

Major: Chemistry (ACS certificate)

GPA: Cumulative 3.72; Major 3.81

RESEARCH WORK EXPERIENCE

Graduate Research Assistant: University of Louisville, Louisville, KY (Aug 2018 – present)

Global mapping of self-consistent field solution space (2018-present): Advisor: Lee M. Thompson

- Algorithms to locate solutions to self-consistent field equations for use as a basis states in post-Hartree-Fock methods
- Writing efficient code (Fortran 03) for characterization of the self-consistent field energy landscape

Undergraduate Research Assistant: Western Kentucky University, Bowling Green, KY (Aug 2015 – May 2018)

Creation of an Interdisciplinary Platform for Renewable Solar Fuel Production (2015-2017) Advisor: Cao Yan

- Primary assistant synthesizing TiO₂ nanotube arrays with photo-responsive properties on titanium foil;
- Instrumental in evaluating, testing, and analyzing complex data for trends and statistical significance;
- Maintained and troubleshot laboratory equipment individually, or with customer support center.

Enhancement of Solar Fuel Productivity and Energy Consumption Saving (2015-2017) Advisor: Cao Yan

- Coordinated lab responsibilities among team members to forward research agenda and solve problems;
- Synthesized improved photocatalytic nanocomposites of TiO₂ with reduced graphene oxide;
- Achieved experiment resulting in a 20% increase of performance of photosensitive material;
- Provided clear quantitative analytical chemistry conclusions through extensive analyzing and testing.

Laboratory Support Activities:

- Aided current projects with the use of software including Gaussian in analyzing molecule's vibrations and rotation modes with different simulation methods.
- Interpreted and clarified graphs generated from UV-vis, IR, MS, LCMS, GCMS, and HPLC for team.
- Transposed experiment raw data into readable sketch graphs, and analysis for the team to use.

AWARDS & ACTIVITIES

AWARDS:

Western Kentucky University President's list	Fall 2014, 2015, Spring 2017
Western Kentucky University Dean's list	Spring 2015, 2016 Fall 2017
Harvey T. Skaggs Scholarship in Chemistry	Fall 2016
Student Government Association Scholarship	Summer 2017
Division of Extended Learning & Outreach Scholarship	Summer 2017
University Doctoral Fellowship	Fall 2018-Present

ACTIVITIES and VOLUNTEERISM:

Confucius International Institute Volunteer	Fall 2014-Present
Eager conversational translator between students, staff, and community	Spring 2017-Present
Participates and aids in open house activities for local support group	Spring 2017 Present
Badminton club	Spring 2014-Present

SKILLS

Professional:

Skilled and experienced with acquiring and interpreting analytical data, and preparing reports.
Trained in materials characterization techniques including: optical techniques, SEM, ICP, FTIR, TGA, SCMS, GC, UV-vis, and building effective photometric titration instruments on-site in lab.

Computational:

Computer programming: Mathematica, Gaussian, Origin, Fortran
Microsoft Office (Word, Excel, PowerPoint, and associated Office Suite technology).

Relational:

Mentored seamless integration of new students to university and chemistry lab;
Bilingual: English, Chinese;
Able to exhibit strong relationship, self-management, and social awareness abilities.

PUBLICATIONS & PRESENTATIONS

- Chen, Y., Dong, X., Cao, Y., Xiang, J.J., & Gao, H.Y. (2017). Enhanced photocatalytic activities of lowbandgap TiO₂-reduced graphene oxide nanocomposites. *Journal of Nanoparticle Research*, 19(6), 200.
- Chen, Y., Gao, H.Y., Wei, D., Dong, X., & Cao, Y. (2017). Langmuir-Blodgett assembly of visible light responsive TiO₂ nanotube arrays/graphene oxide heterostructure. *Applied Surface Science*, 392, 1036-1042.
- Dong, X, J., Cao, Y. (2017). Visible-Light Responsive Graphene Oxide (GO)/TiO Nanotube Array (TNA) Heterostructure Assembled Using Langmuir-Blodgett Method (Posters-at-the-Capitol), Frankfort, KY
- Ying Chen, Y., Gao, H., Xiang, J., Dong, X., Cao, Y. (2018). Enhanced Photocatalytic Activities of TiO₂-Reduced Graphene Oxide Nanocomposites Controlled by Ti-O-C Interfacial Chemical Bond. *Materials Research Bulletin*, 99, 29-36.
- Dai Shunliab, Li Huib*, Yang Zhilianga, Dai Mingweic, Dong Xinju, Sun Meie, Shi Liulinb Impacts of Biochar on the Speciation and Bioavailability of Heavy Metals in Chicken manure Compost
- Li Huia, Dai Mingweib, Dai Shunlic, Dong Xinju, Sun Meie, Ge Xina, Shi Liulina Straw Return in China – A literature review

REFERENCES

Available upon request.