

# NAME

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ADDRESS  
PHONE; EMAIL  
WEBSITE

## Education

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**Ph.D. in Chemistry, University of Pennsylvania, Philadelphia, PA** 20XX

Thesis title: *TITLE*

Thesis advisor: Professor NAME co-advisor: Professor NAME

**B.S. in Physical Chemistry, University of Science and Technology of China (USTC), China** 20XX

Thesis title: *TITLE*

Thesis advisor: Professor NAME Major GPA: 3.92/4.30 Rank: 5/82

## Awards

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Washington Research Foundation Postdoctoral Fellowship, University of Washington 20XX

GAPSA Graduate Travel Award, University of Pennsylvania 20XX

Outstanding Student Scholarship (1<sup>st</sup> Grade, 5 out of 83), USTC 20XX

Panasonic Scholarship (2 out of 40), USTC 20XX

Second Prize in the Contest for Research-oriented Physical Experiment, USTC 20XX

National Financial Stipend (2 out of 40), USTC 20XX

## Publications

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1. NAME, NAME, NAME\*, NAME\*. TITLE. *ACS Nano*, submitted.

*First experimental and theoretical demonstration of nanoparticles (i.e., raspberry-like metamolecules) whose dimers exhibited Raman enhancement weakly dependent on the separation distance. The raspberry-like metamolecule is envisioned to be promising building blocks for fabricating large area reproducible and efficient Raman substrates without requiring accurate control of interparticle distances.*

2. NAME, NAME, NAME, NAME\*. TITLE. *Opt. Express*, in press.

3. NAME, NAME, NAME. TITLE. *ACS Nano*, 20XX, 4, 123–170. (Journal Impact Factor: 12.033)

*First experimental demonstration of a three-dimensional metamaterial (i.e., raspberry-like metamolecules) exhibiting strong magnetic resonance with similar intensity to that of electric resonance in the optical region. The raspberry-like metamolecule is made of a large number of well-insulated gold nanoparticles assembled on a polymer template. The robustness and tunability of the synthetic method and the strong magnetic responses of the resulting raspberry-like metamolecules can lead to large-scale manufacturing and wide applications of magnetic metamaterials.*

*Highlighted in Penn News:*

*http://www.upenn.edu/URL; Highlighted in PhysOrg: http://phys.org/news/URL*

4. NAME, NAME\*. TITLE. *Chem. Mater.*, 20XX, 2, 72–177. (Journal Impact Factor: 8.535)

*First experimental demonstration that a combination of silver seed and an aromatic surfactant can result in high-yield syntheses of gold triangular nanoprisms and sub-2 nm ultrathin nanowires.*

5. NAME, NAME, NAME, NAME\*. TITLE. *ACS Nano*, 20XX, 2, 25–34. (Journal Impact Factor: 12.033)

*First experimental and theoretical demonstration that dark quadrupole modes can efficiently enhance Raman scattering on single particles.*

6. NAME, NAME, NAME\*. TITLE, *Nano Lett.*, 20XX, 3, 49–55. (Journal Impact Factor: 12.940)

## Presentations

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1, **NAME**, **NAME**, **NAME**. **TITLE**. Department of Chemistry, University of Washington, Seattle, WA, January 12, 20XX. (*Invited oral presentation*)

2, **NAME**, **NAME**. **TITLE**. KLA-Tencor Corporation, Albany, NY, November 18, 20XX. (*Invited oral presentation*)

3, **NAME**, **NAME**. **TITLE**. Gordon Research Conference, Nobel Metal Nanoparticles. Mount Holyoke College, MA, June 15-20, 20XX. (*Presented 2 posters*)

4, **NAME**, **NAME**. **TITLE**. Nano/Bio Interface Center RT1 Meeting, Philadelphia, PA, May 14, 20XX. (*Oral presentation*)

## Research Experience

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**Washington Research Foundation Innovation Fellow, University of Washington** **20XX-present**

Develop interdisciplinary research programs in the Clean Energy Institute at the University of Washington with a focus on using plasmonic nanomaterials for solar water splitting; team leader and lab manager in Professor **NAME** and **NAME**'s research group.

**Graduate Research Associate, University of Pennsylvania** **20XX- 20XX**

Dedicated to investigate how plasmonic nanoparticles interact with light via both wet chemistry method and electrodynamic simulation.

(a) Syntheses and assembly of colloidal particles

Created a novel method to synthesize nanoshells and anisotropic nanoparticles with improved yield (from 60% to 85%), tunable sizes (10 nm to 300 nm), shapes (spheres, rods, triangular nanoprisms, nanowires), chemical compositions (Au, Ag) and optical properties.

Functionalized nanoparticles with polymers (DNA/peptide/PEG) and tuned particle-particle interactions on molecular level via varying polymer length and composition; assembled responsive macroscopic thin film structures using nanoparticle-polymer composites via carefully tuning the molecular interaction.

(b) Surface-enhanced Raman spectroscopy (SERS)

Designed efficient and reproducible single particle Raman substrates and evaluated their Raman enhancement capability via correlating scanning electron microscopy (SEM) and Raman spectroscopy; studied the origin of their enhanced Raman scattering and proposed a novel enhancement mechanism; discovered a novel Raman substrate promising for large area fabrication and industrial application.

(c) Electrodynamic simulation

Built computer models of plasmonic nanoparticles using MATLAB; investigated how plasmonic nanoparticles interact with light via electrodynamic simulation using finite-difference time-domain (FDTD) method; quantitatively analyzed and visualized large-scale simulation data using MATLAB.

**Research Assistant, University of Science and Technology of China** **May, 20XX-June, 20XX**

Designed efficient metal oxide catalysts for automotive exhaust treatment utilizing wet chemistry methods; proposed an interfacial catalytic mechanism via comprehensive surface characterization.

## Teaching Experience

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**Graduate Teaching Assistant, Department of Chemistry, University of Pennsylvania** **20XX-20XX**

Developed and delivered presentations twice a week to 13 sections of post-baccalaureate students; stimulated inquiry-based group discussions which aired ideas to reach consensus on experimental design; supervised over 200 students doing experiments and writing up professional laboratory reports; arranged weekly meetings to evaluate the students' academic progress and help them prepare for exams.

## Professional Development

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### Graduate Mentor, Department of Chemistry, University of Pennsylvania

20XX-Present

Mentored NAME, a postdoctoral researcher in Professor NAME'S group

Helped him design projects for his one-year postdoctoral research; taught him to evaluate the Raman enhancement of plasmonic nanoparticles; instructed him how to analyze and present data professionally.

Mentored NAME, a master student in Professor NAME's group

Designed her research projects; instructed her to synthesize nanoparticles step by step; taught her to analyze research results, propose hypothesis and figure out solutions to problems.

Mentored NAME, a graduate student in Professor NAME's group

Designed multiple projects for his doctoral dissertation research; trained him to do wet chemistry experiments and finite-difference time-domain simulation on plasmonic nanostructures; instructed him to identify scientific problems, conceive solutions and write research papers.

### ACS Seed Project Mentor, University of Pennsylvania

June 20XX-Aug 20XX

Trained a high school student (NAME) to synthesize particles and give presentations; counseled her on career options. She is currently a college student majoring in biochemistry in Penn State Univ.

## Professional Associations

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Member of the American Chemical Society (ACS), 20XX-present

Member of the Materials Research Society (MRS), 20XX-present

## Collaborators

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**Dr. NAME** (Intel Corporation, USA), **Dr. NAME** (Mount Sinai School of Medicine, USA), **Dr. NAME** (Illumina, USA), **Dr. NAME** (CGG, USA), **Dr. NAME** (assistant professor at University of Houston, USA), **Dr. NAME** (Ewha Womans University, South Korea), **Dr. NAME** (ASML, the Netherlands), **NAME** (University of Pennsylvania, USA), **NAME** (University of Pennsylvania, USA), **NAME** (University of Washington, USA).

## Academic & Community Service

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### Manuscript Peer Review

Scientific Reports; Inorganic Chemistry Frontiers; Journal of Nanomaterials; Physics and Chemistry of Liquids; Current Pharmaceutical Design

The 4th Global Conference on Materials Science and Engineering (CMSE 20XX)

### Educational Outreach

Science Representative, Philadelphia Area Girls Enjoying Science™ (PAGES™)

Nov, 20XX

Demonstrated vivid chemistry experiments to sixth-grade girls to foster their interest in science.

Scientist, Nanoday@Penn

20XX-20XX

Demonstrated posters, models and samples about nanotechnology research across campus to inspire interest towards nanoscience among high school students and teachers.

Science Presenter, the Franklin Institute, Philadelphia, PA

Aug 20XX-Feb 20XX

Held a 4-hour open session every Saturday to teach tourists with diverse ages and scientific knowledge; organized interactive question and answer games to help young kids learn and digest scientific concepts.