

DR. CUIKUN LIN

Associate Director

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Department of Physics - Center for Emerging Energy Sciences
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WORK EXPERIENCE

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| ❖ Associate Director | 2020 - Present |
| Texas Tech University, Department of Physics | Supervisor: |
| Center for Emerging Energy Sciences | Robert V. Duncan |
| ❖ Senior Scientist | 2016 - 2020 |
| Texas Tech University, Department of Physics | Supervisor: |
| Center for Emerging Energy Sciences | Robert V. Duncan |

Responsibilities:

As a senior scientist in Center for Emerging Energy Sciences, my responsibilities include: Collecting preliminary data for establishing and implementing new research directions; Supervising undergraduates and graduates and cooperate with scientists to complete complex projects; Troubleshooting and problem-solving in areas of expertise; Perform investigation(s) on any out-of-specification or otherwise unexpected results; Manage Lab Instruments; Computer troubleshooting and data recovery; Writing scientific papers and proposals.

Achievements: 1 paper was published and 1 proposal was submitted.

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| ❖ Senior Research Associate | 2015 - 2016 |
| Texas Tech University, Department of Physics | Supervisor: |
| Center for Emerging Energy Sciences | Robert V. Duncan |

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| ❖ Research Assistant Professor | 2010 - 2014 |
| University of South Dakota, Department of Chemistry | Supervisor: |
| | P. Stanley May |

Responsibilities:

As a research scientist in PANS group (Photo active nanoscale system), my responsibility includes: Collect preliminary data for establishing and implementing new research directions; Supervise undergraduates and graduates and cooperate with scientists to complete complex projects; Troubleshoot and problem solve in areas of expertise; Perform investigation on any out-of-specification or otherwise unexpected results; Manage Lab Instruments, responsible for the maintenance and training of TEM, lasers and spectroscopy instruments; computer trouble shooting and data recovery; Write scientific papers and proposals.

Achievements: 9 papers were published and 1 proposal was submitted.

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| ❖ TEM Manager | 2010 - Present |
| University of South Dakota, Department of Chemistry | Supervisor: |
| | P. Stanley May |

Responsibilities:

In charge of the maintenance and training of TEM, and supervising TEM operation. TEM

characterization for research groups in the chemistry department and exterior collaborators to support their research.

❖ **Postdoctoral Researcher**

2009 - 2010

University of New Orleans, Advanced Materials Research Institute

Supervisor:
Gabriel Caruntu

Responsibilities:

Synthesis and characterization of multiferrous magnetic nanomaterials. AFM/MFM/PFM microscope setup, adjustment and maintenance.

Achievements: 3 ACS papers were published.

❖ **Postdoctoral Researcher**

2007 - 2009

University of South Dakota, Department of
Chemistry

Supervisor:
P. Stanley May

Responsibilities:

Synthesis and characterization of luminescence nanomaterials. Supervised students' research. Managed the lab/field equipment and maintained the necessary supply level.

Achievements: 3 papers published.

❖ **Research Assistant**

2002 - 2007

Changchun Institute of Applied Chemistry,
Chinese Academy of Science

Supervisor:
Jun Lin

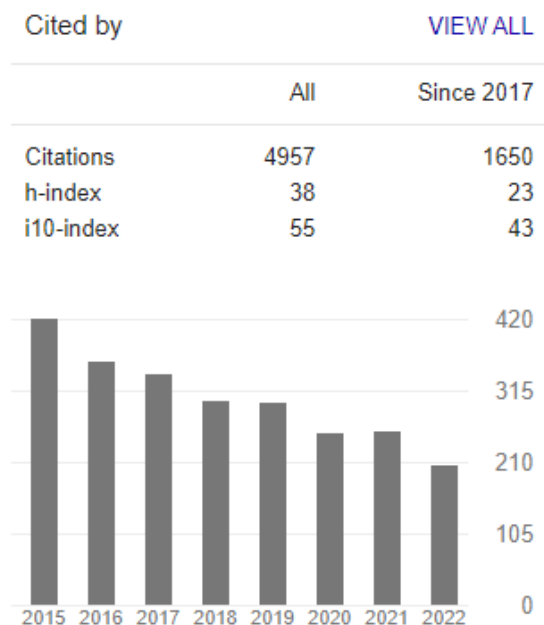
Responsibilities:

Synthesis and characterization of luminescence nanomaterials and core-shell structured materials using Ems and laser spectroscopy as major characterization instruments.

EDUCATION

Year	Institute	Degree
9/2002 ~ 7/2007	State Key Laboratory of Rare Earth Resource Utilization, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences (CIAC, CAS)	<i>Ph.D., Inorganic Chemistry</i>
9/1998 ~ 7/2002	Department of Chemistry, Shandong Normal University	<i>B.S., Chemistry</i>

<https://scholar.google.com/citations?user=JLii954AAAAJ&hl=en>



Publications (representative)

Total of 60 papers and 2 patents were published, and total number of citations are over 4000.

- [1] C. Wang, L. Zhang, H. Yang, J. Pan, J. Liu, C. Dotse, Y. Luan, R. Gao, C. Lin, J. Zhang, J. Kilcrease, X. Wen, S. Zou, and J. Fang, “High-Indexed Pt₃Ni Alloy Tetrahedral Nanoframes Evolved through Preferential CO Etching”, *Nano Letters* 2017 17 (4), 2204-2210.
- [2] A. Yourdkhani, A. Perez, C. Lin, G Caruntu, “Magnetolectric perovskite-spinel bilayered nanocomposites synthesized by liquid-phase deposition”, *Chemistry of Materials* 22 (22), 6075-6084.
- [3] H.P. Paudel, L. Zhong, K. Bayat, M.F. Baroughi, S. Smith, C. Lin, C. Jiang et. “Enhancement of near-infrared-to-visible upconversion luminescence using engineered plasmonic gold surfaces”, *The Journal of Physical Chemistry C* 115 (39), 19028-19036
- [4] Andrew K. Gillespie, Cuikun Lin, Robert P. Thorn Jr., Heather Higgins, Robert Baca, Andrew A. Durso, Django Jones, Ruth Ogu, Jeremy Marquis, and R. V. Duncan, A New Fast Response Cryogenic Evaporative Calorimeter, *Review of Scientific Instruments*, 91(2020), 085103
- [5] Robert P. Thorn Jr., Andrew K. Gillespie, Cuikun Lin, et al, A quantitative light-isotope measurement system for climate and energy applications, *International Journal of Mass Spectrometry* 464 (2021) 116574