Hongda Su

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Education

University of Science and Technology of China   Aug. 2023 – Present
Department of Thermal Science and Energy Engineering
- **Major:** Energy and Power Engineering
- **Minor:** Chemistry
- **GPA: 3.77/4.30** (Major Ranking **1/42**)

Honors and Awards
- Wu Zhonghua Talent Program Scholarship   Nov. 2025
- CAS Guangzhou Institute of Energy Conversion Scholarship   Oct. 2024
- Outstanding Freshman Scholarship   Dec. 2023

Research Experience
Design of a Thermal Metastructure for Thermal Camouflage   Jun. 2025 – Present
with Prof. Liqun He (School of Engineering Science, USTC, China)
- Proposed and validated a method of designing **thermal metamaterials** to reshape heat sources during transient heat conduction
  - Performed thermal field transformation using Coordinate Transformation Theory
  - Developed 3D models and conducted the FEA simulations with **COMSOL Multiphysics** and **Matlab**
  - Experimentally verified the design's feasibility and efficiency with metallic 3D-printed prototypes.

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Design of a AuNP-DNA Structure for Targeted Cell Killing   Feb. 2025 – Jun. 2025
with Prof. Tao Li (School of Chemistry and Materials Science, USTC, China)
- Devised a functionalized DNA structure for selective cancer-cell recognition, uptake and triggering cell apoptosis based on the TfR-mediated endocytosis and the affinity between paired i-motifs
  - Conducted an extensive literature review and group discussions to deepen understanding of Nucleic Acid Chemical Biology

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Catalytic Efficiency of Metal Oxides in Activating Persulfates   Jul. 2024 – Dec. 2024
with Dr. Wan Li (School of Chemistry and Materials Science, USTC, China)
- Compared the catalytic efficiencies of various metal oxides with characterized morphologies in peroxymonosulfate(PMS)-based and peroxydisulfate(PDS)-based advanced oxidation processes(AOPs)
  - Characterized various metal oxides with scanning electron microscope(**SEM**) and X-ray diffraction(**XRD**), including synthesized Cu_2O nanospheres and nanocubes
  - Monitored the reaction process via **UV–Vis spectrophotometry**, with Rhodamine B as the substrate
  - Processed and visualized the experimental data, providing convincing interpretations of the results

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Research Interests
- Thermal metamaterials and heat-transfer control
- Computational modeling and 3D model development
- Interdisciplinary research across thermal physics, chemistry, and materials science

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Skills
- **English Tests:** TOEFL 99 (MyBest 101)
- **Programming:** C/C++, Matlab, LaTeX, bash
- **Software:** Solidworks, Origin, COMSOL, Auto CAD, Lammps, ChemDraw, Jade, ImageJ

University of Science and Technology of China

中国科学技术大学

Scholastic Record

Reg.NO: PB23030797	Name: Su Hong Da	Gender: Male		Date of Birth: 2004-11-24
Enrl Date: 2023-09-01	Dep Date:	E.S: 4		

School: Department of Thermal Science and Energy Engineering

Major: Energy and Power Engineering   All Curriculum GPA: 3.77   All Curriculum Weighted Average Score: 88.61

Term	Course Title	Gr.	Hrs.	Cr.	Term	Course Title	Gr	Hrs	Cr
2023FA	Basic Sports	B+	40	1	2023FA	Safety in the Chemical Laboratory	Pass	20	1
2023FA	Mechanics A	86	80	4	2024SP	Linear Algebra B1	88	80	4
2023FA	Mathematical Analysis B1	87	120	6	2024SP	Electromagnetism A	86	80	4
2023FA	*Collegiate Psychology	A	40	2	2024SP	An Outline of Modern and Contemporary Chinese History	91	50	2.5
2023FA	Military Theory	Pass	40	2	2024SP	Experiment of Inorganic Chemistry II	A	80	2
2023FA	Ideology, Morality, and Rule of Law	87	50	2.5	2024SP	Inorganic Chemistry I	90	40	2
2023FA	Experiment of Inorganic Chemistry I	B+	80	2	2024SP	College Physics – Base Experimentation B	89	40	1
2023FA	Introduction to Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era	82	54	3	2024SP	Tennis I	B+	40	1
2023FA	Computer Programming A	91	100	4	2024SP	English Reading & Writing Upper Intermediate II	90	20	1
2023FA	General Chemistry A	98	80	4	2024SP	English Communication Intermediate II	91	40	2
2023FA	English Communication Intermediate I	88	40	2	2024SP	Freshman Seminar	A+	20	1
2023FA	English Reading & Writing Upper Intermediate I	92	20	1	2024SP	History of Reform and Open-up	Pass	20	1
2023FA	Military Skills	Pass	70	2					
2024FA	Function of Complex Variable(Chemistry)	83	40	2	2024FA	Experiment of Analytical Chemistry I	A	80	2
2024FA	College Physics – Comprehensive Experimentation B	83	20	0.5	2025SP	Swimming	A	40	1
2024FA	Physical Chemistry I	86	80	4	2025SP	German Language and Culture(Elementary)	A	80	4
2024FA	Mod. Japan Language and Culture(Elementary)	A-	80	4	2025SP	Practice on Chinese Important Thoughts	Pass	80	2
2024FA	Fundamentals of Marxism	83	50	2.5	2025SP	Organic Chemistry(A2)	82	40	2
2024FA	Organic Chemistry(A1)	87	80	4	2025SP	Introduction to Mao Zedong Thought and Theoretical System of Socialism with Chinese Characteristics	87	50	2.5
2024FA	Physical Fitness II	B+	40	1	2025SP	Physical Chemistry II	88	60	3
2024FA	Optics B	79	40	2	2025SP	Academic English for Science and Technology A	97	40	2
2024FA	Analytical Chemistry I	90	40	2	2025SP	Practices of Engineering Science	A+	80	2
2024FA	Experiment of Organic Chemistry I(EN)	A-	80	2	2025SP	Mathematical Analysis B2	90	120	6

Note: (H) represents the curriculum of Honors;   FA:Fall SP:Spring SU:Summer

Grades on the pass/fail system do not count toward GPA and weighted average score

Special campaigns marked with an asterisk (*) are included in the GPA calculation, with a maximum of 4 credits. Specific competition names and award details should be referenced from the certificates.

GPA Calculation:

Centesimal Grade:	100~95	94~90	89~85	84~82	81~78	77~75	74~72	71~68	67~65	64	63~61	60	
Letter Grade:	A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	
Point Value:	4.3	4	3.7	3.3	3	2.7	2.3	2	1.7	1.5	1.3	1	

$$GPA = \frac{(Course\ Credit * Course\ GP)}{Course\ Credit}$$