

Anthony Katona

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🎓 Education

The Pennsylvania State University

Chemistry (State College, PA)

2023

PhD

- 🔬 designed & synthesized ultra-fast/nano-scale thermal transport materials; developed photo-thermal polymer techniques for coatings & 3D-printing applications with *Dr. Benjamin Lear*
- ⚠️ oversaw lab safety as General Safety Officer & Laser Safety Officer as well as managed supply & maintenance of pumps, gas cylinders, and gloveboxes
- 👤 taught as TA for all 5 first year chemistry courses for a total of 7 semesters
- 👤 co-developed & implemented novel thermal conductivity undergraduate lab experiments for *Dr. Bratoljub Milosavljevic's* physical chemistry course
- 👤 served as graduate student TA mentor for 1/3 of class & research mentor for 4 undergraduate researchers, teaching experimental design, instrument use, scripting, and data analysis

Susquehanna University

Biochemistry; Physics minor (Selinsgrove, PA)

2015

BS

- 🔬 synthesized transition metal Janus complexes with *Dr. William Dougherty*
- 🔬 trained galaxy classification software in computational summer research with *Dr. Violet Mager*

🛠 Technical Skills

- 💡 **spectroscopy:** NMR, IR, UV-Vis
- 🔬 **microscopy:** AFM, TEM, SEM
- 🏗 **materials:** mechanical (UTM, DMA), thermal (DSC, TGA, TPS)
- ⚙ **laser:** class IV CW/pulsed safety, handling, optics
- 🔌 **electronics:** circuit design/prototyping, signal generation, spectrum analysis, micro-controllers
- 💻 **languages:** Python, C#, C++, Labview, HTML, CSS, JS
- 🎮 **3D:** Blender (modeling, sculpting, rigging, animating, shading, VFX, compositing), Unreal Engine
- 🧰 **misc. software:** Adobe CC (Ae, Il, Ps, Pt, Pr), FL Studio, ImageJ, ChatGPT

🌐 External Resources

reference: Dr. Mary Jo Bojan (TA Supervisor) - bz6@psu.edu

publications:

- A Katona & B Lear, 2024 (submitted) Macromol., **“Effective photothermal curing of PDMS...”**
- S Phillips *et al*, 2024 (submitted) Indust. Chem. & Mat, **“Nanometer-Scale Surface Roughness...”**
- A Katona & B Lear, 2024 (prepared) JPPC, **“Mechanical/morphological control of CB-PDMS...”**
- V Mager *et al* 2018, ApJ 864 **“Galaxy Structure in the Ultraviolet...”**

portfolio: frkatona.github.io