Sustained Release of Azobenzene Derivatives from Selectively Permeable Nanocapsules

Marianna Lombardi
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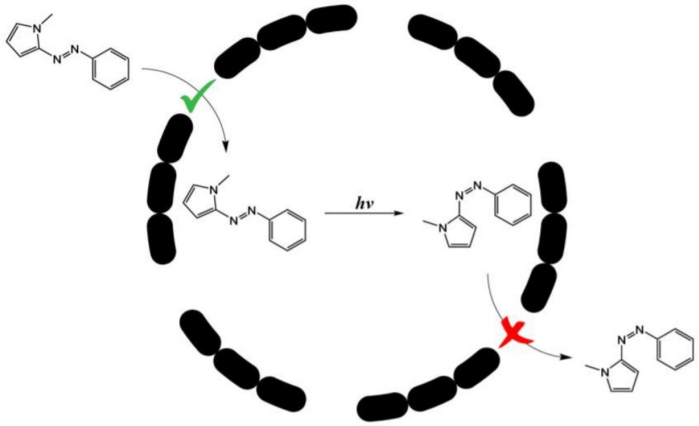
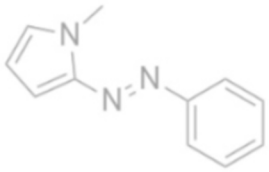
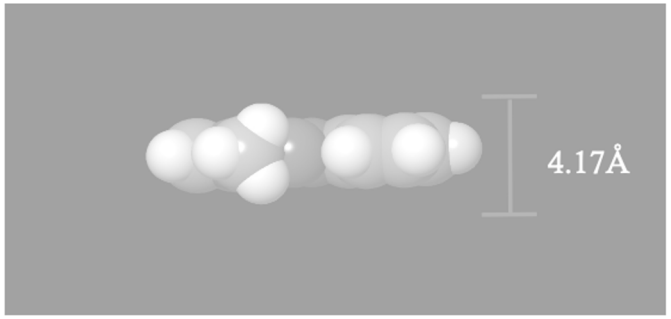
Background

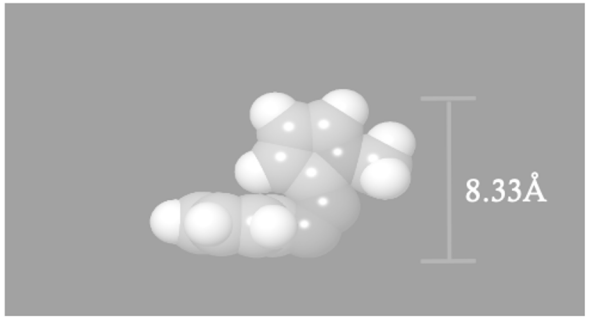




E configuration



Z configuration



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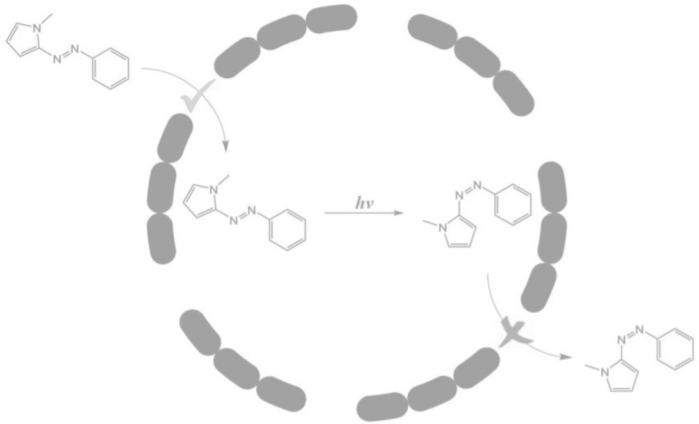

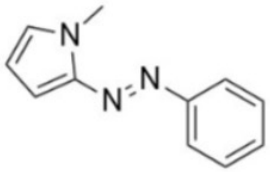

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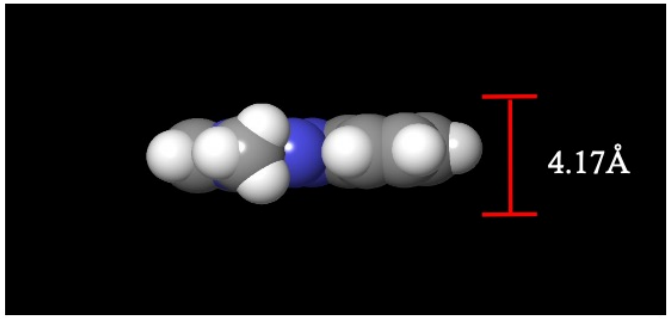
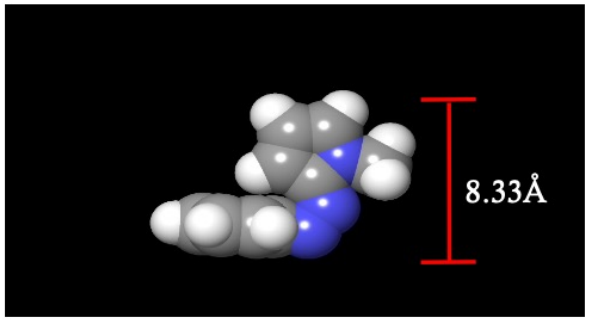
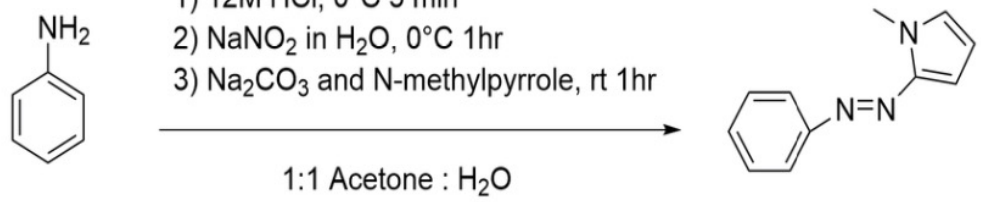
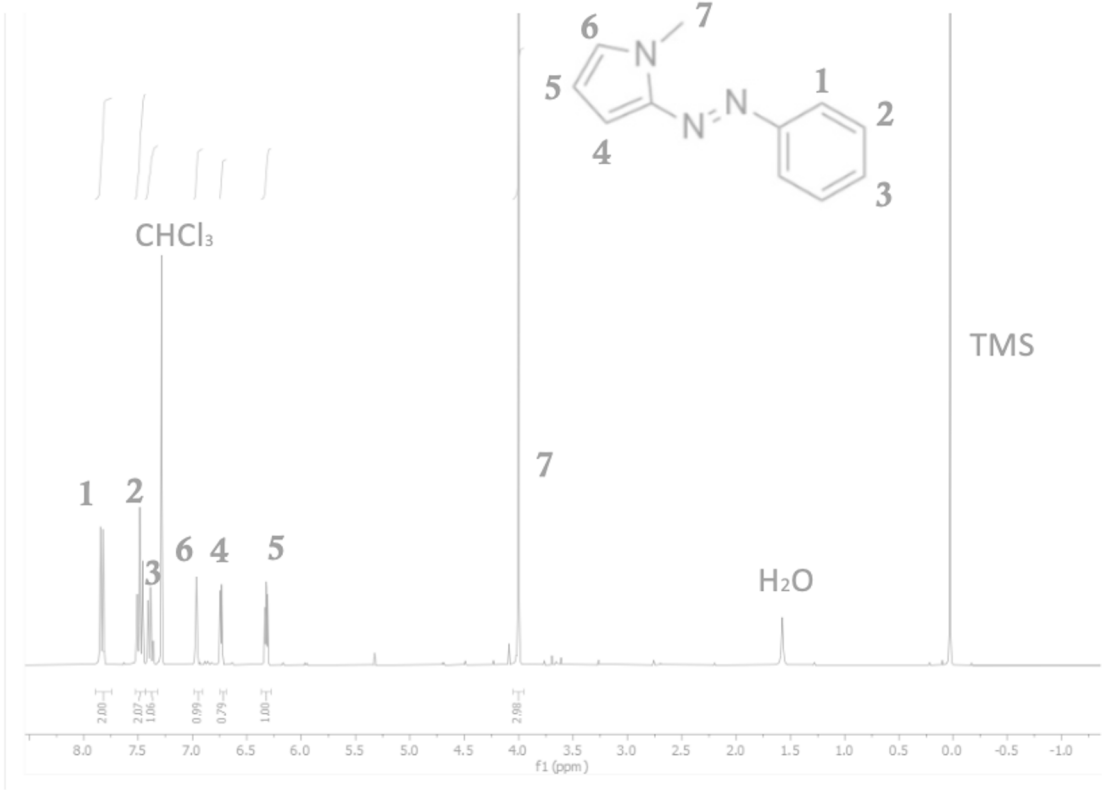


Z configuration



Synthesis of the Azobenzene





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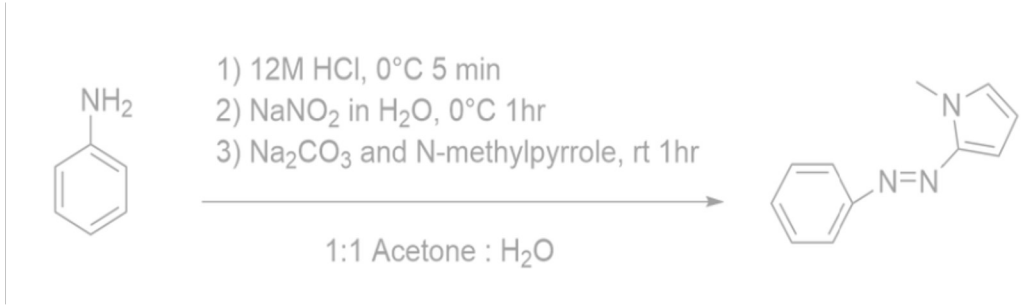
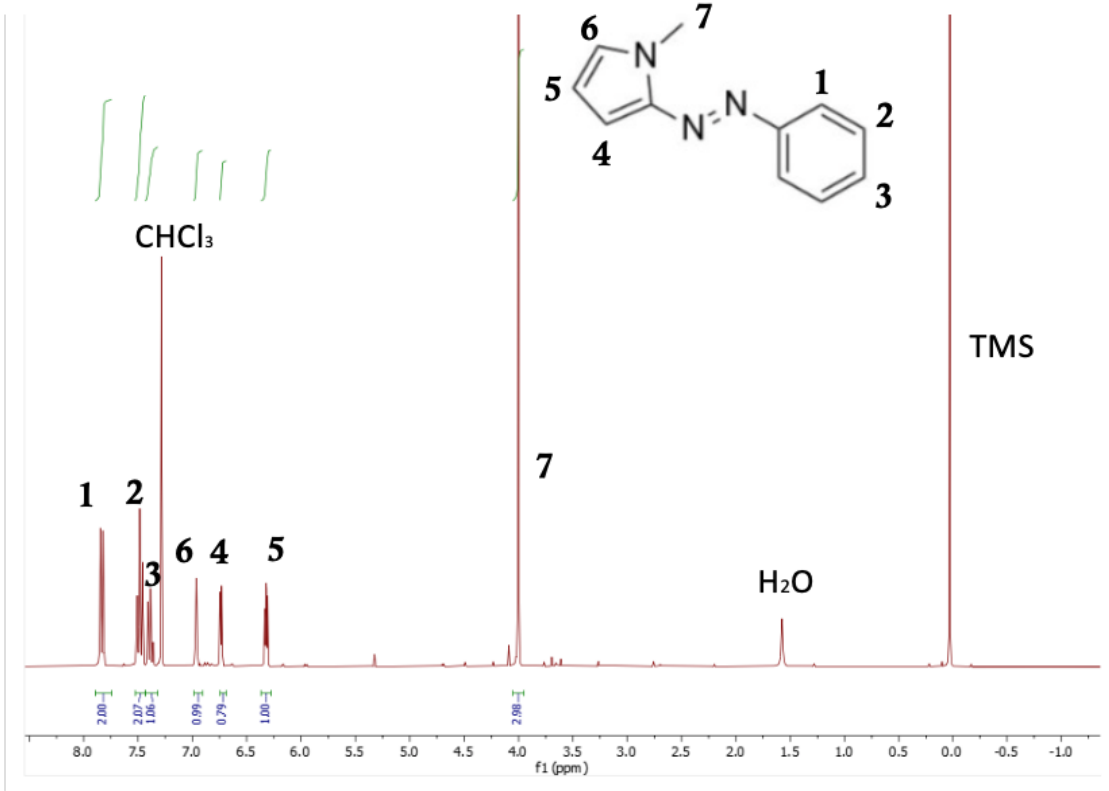
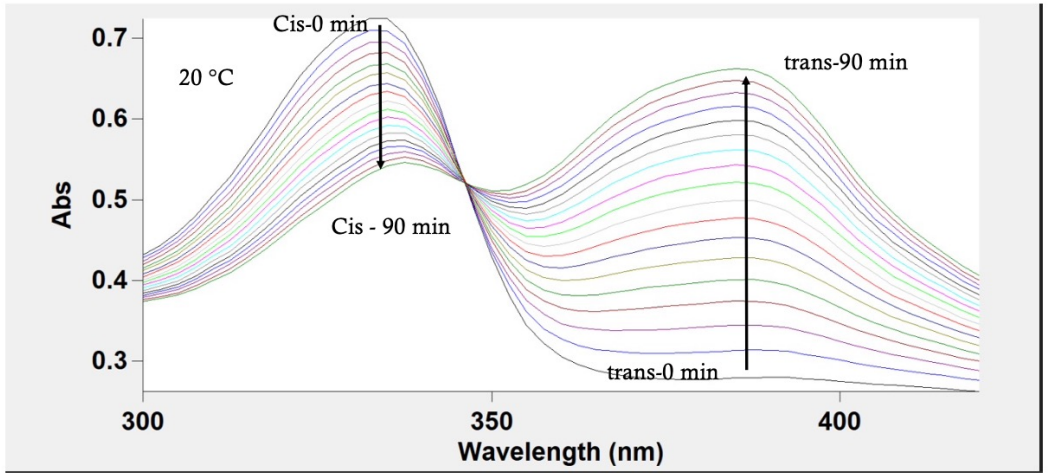
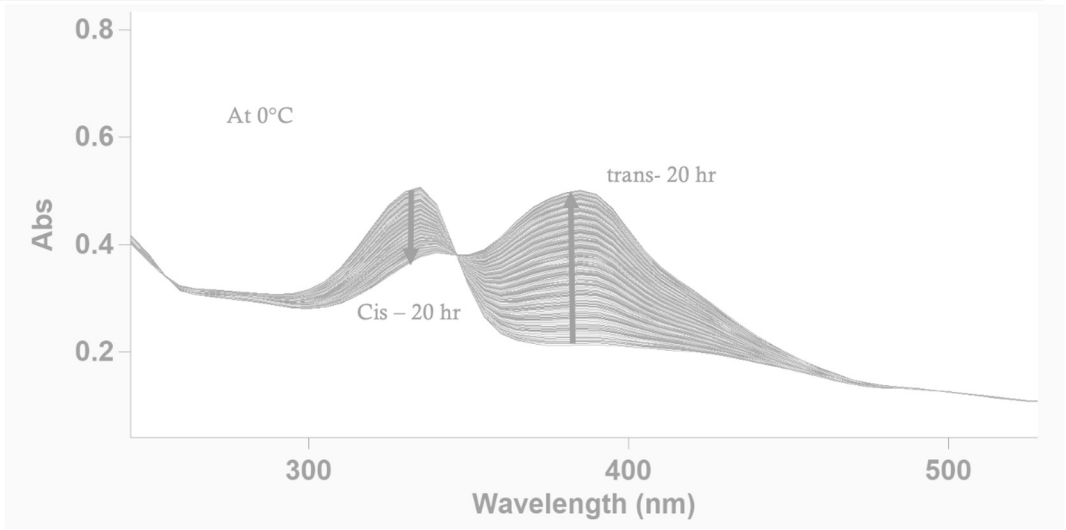
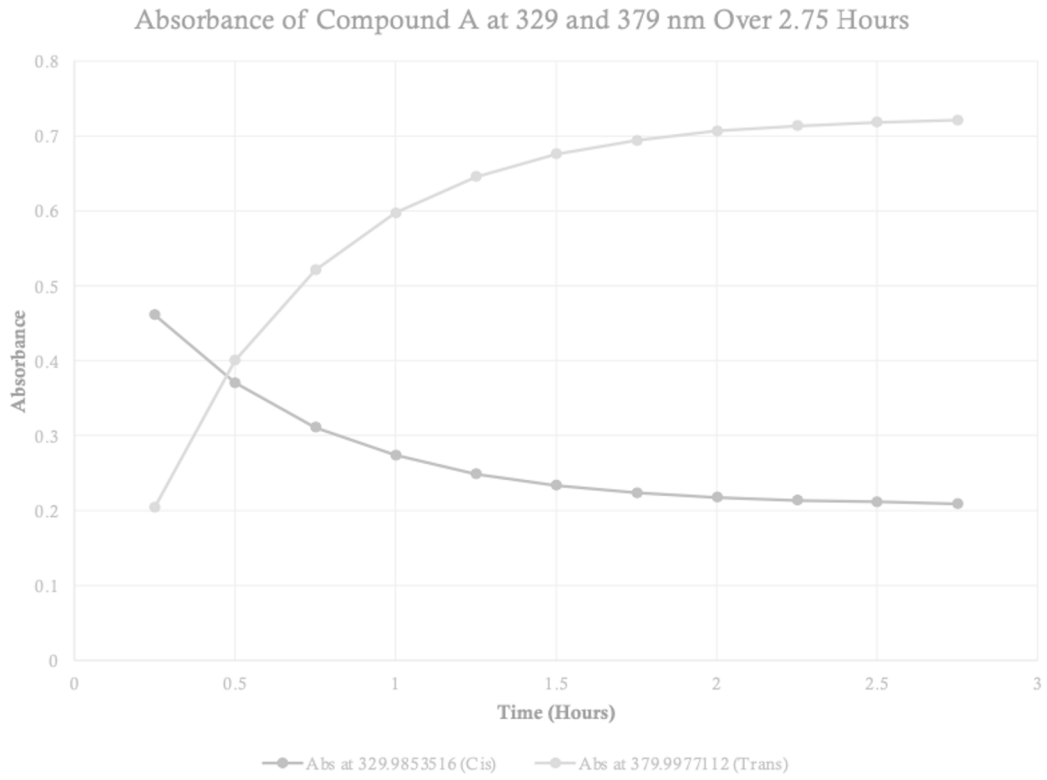




Thermal Relaxation and Half-Life







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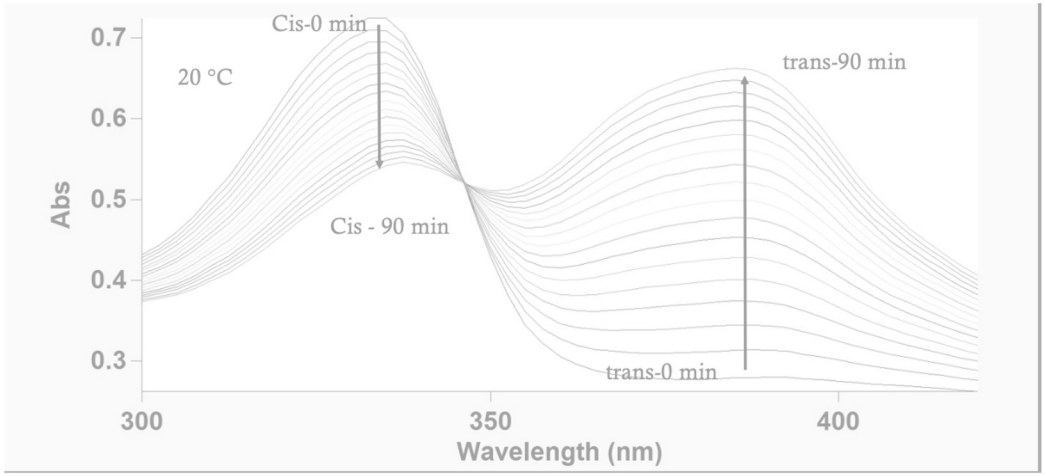

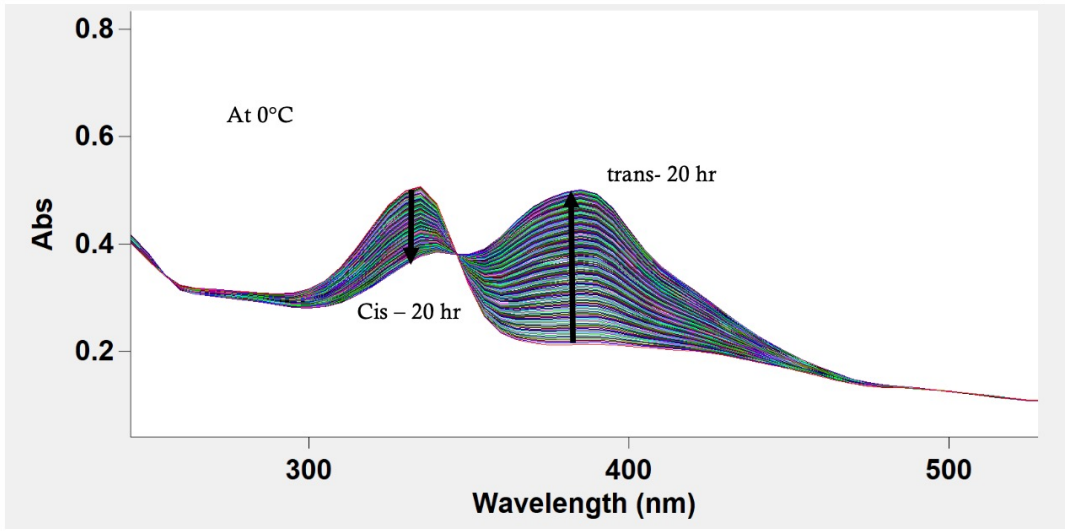

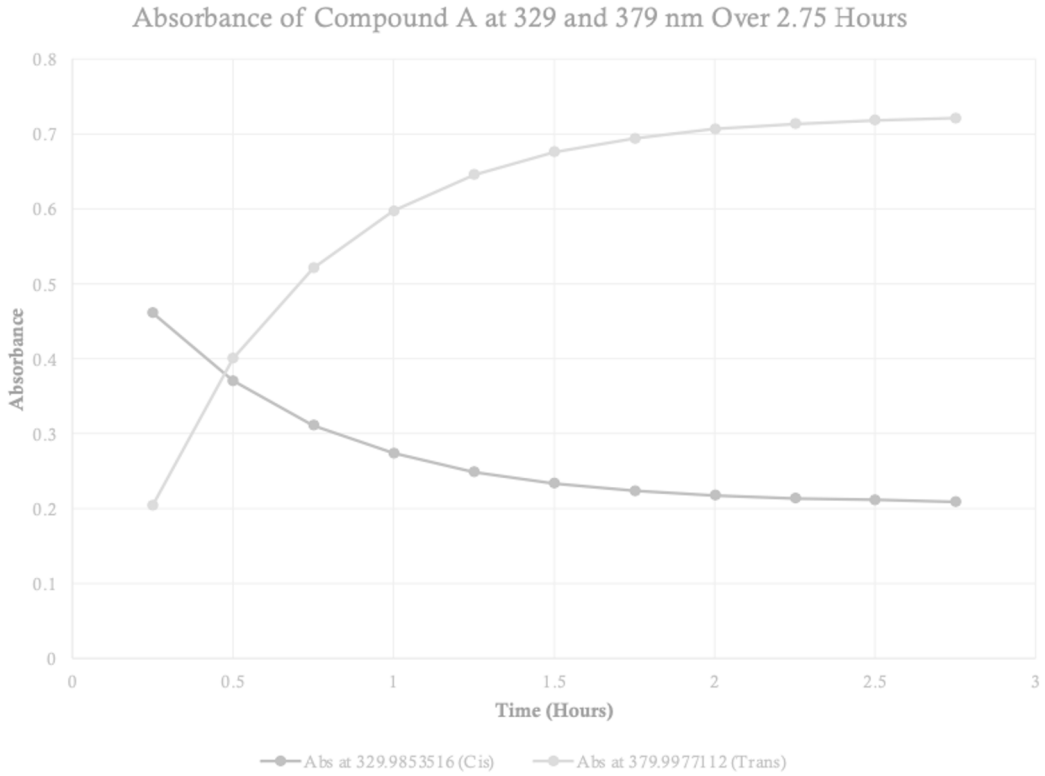

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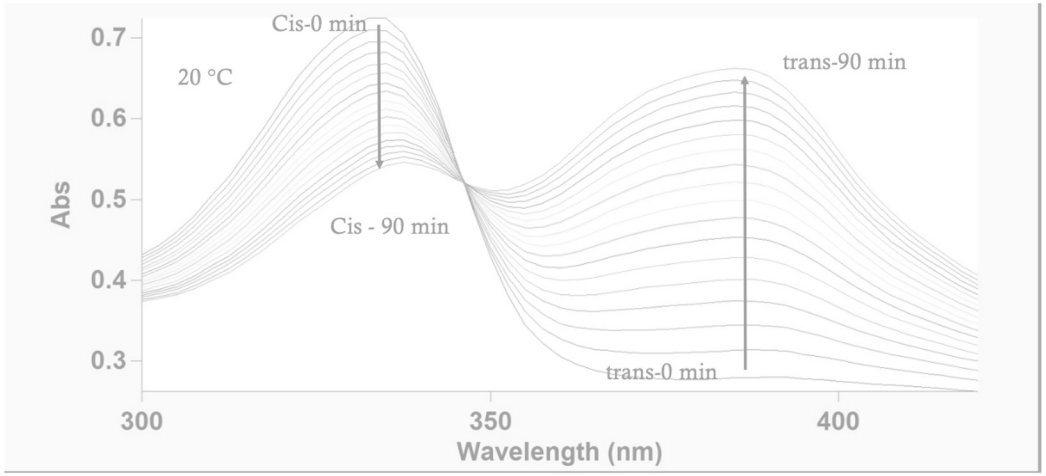
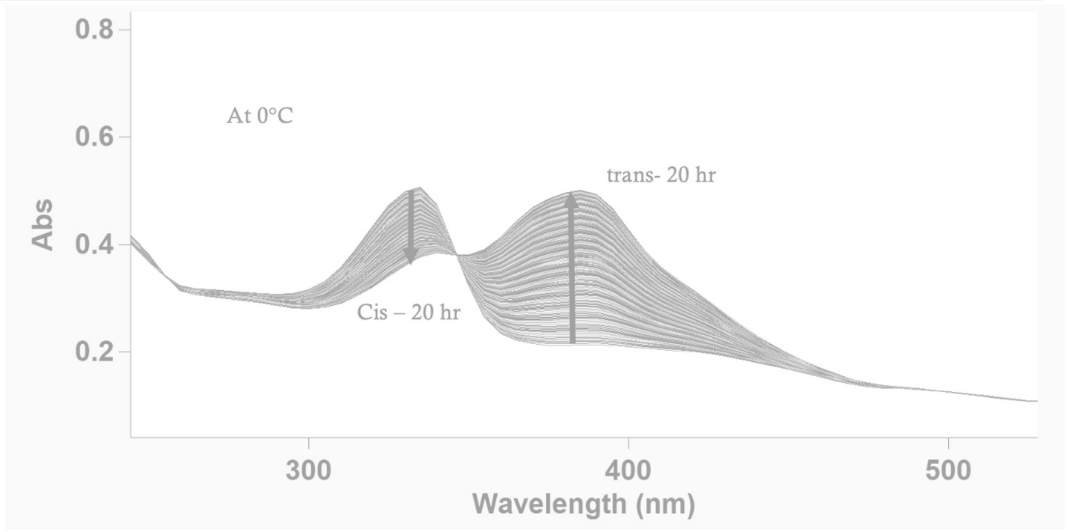
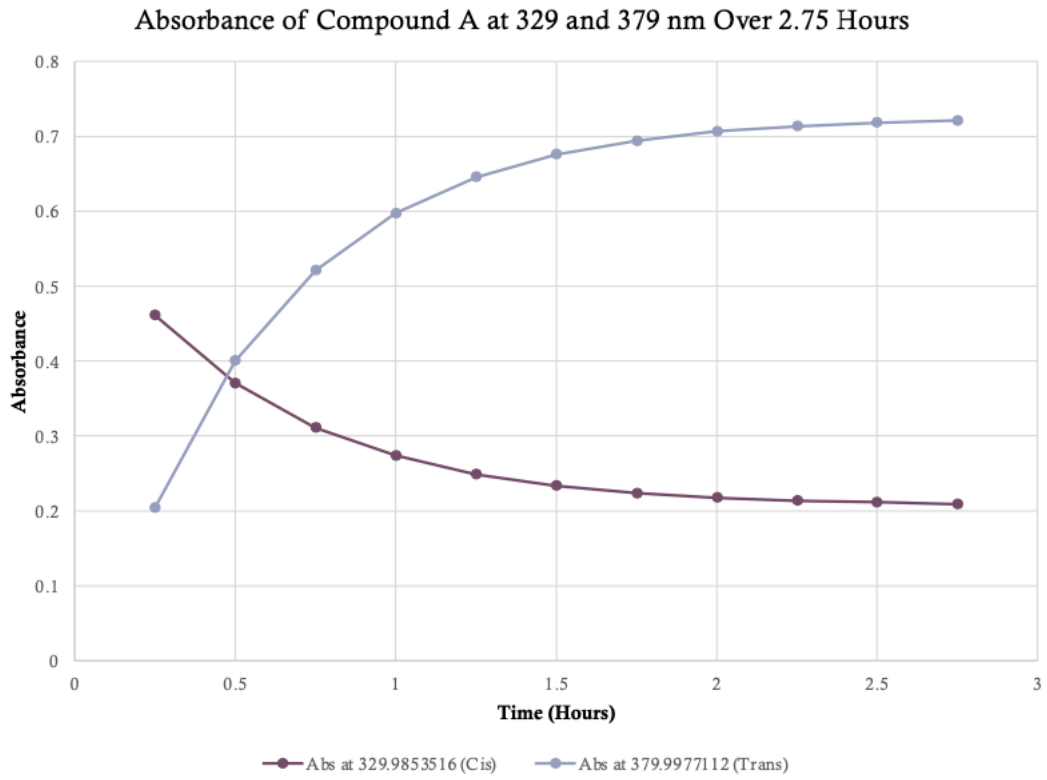
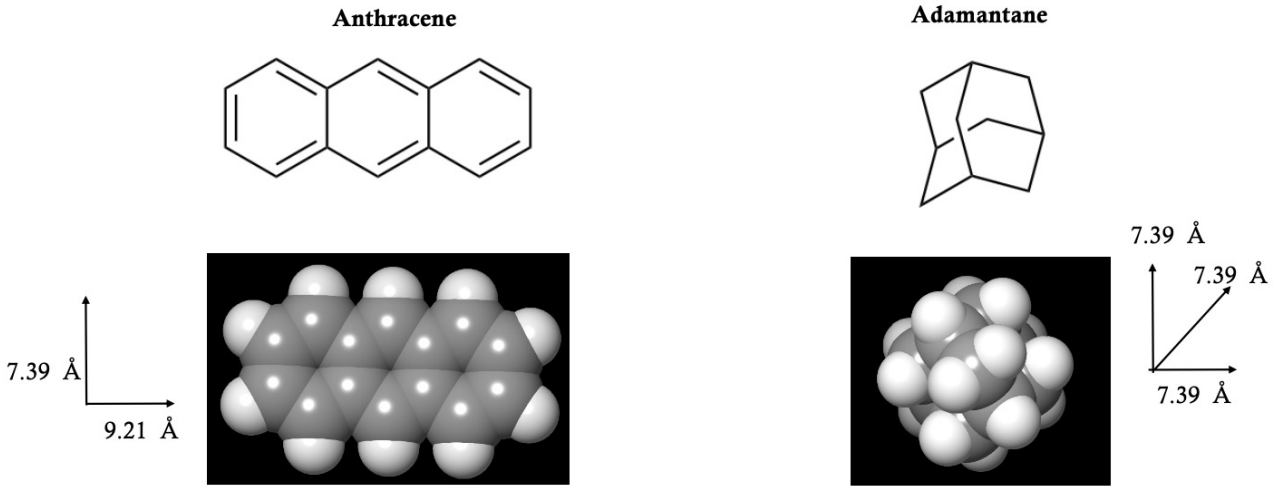
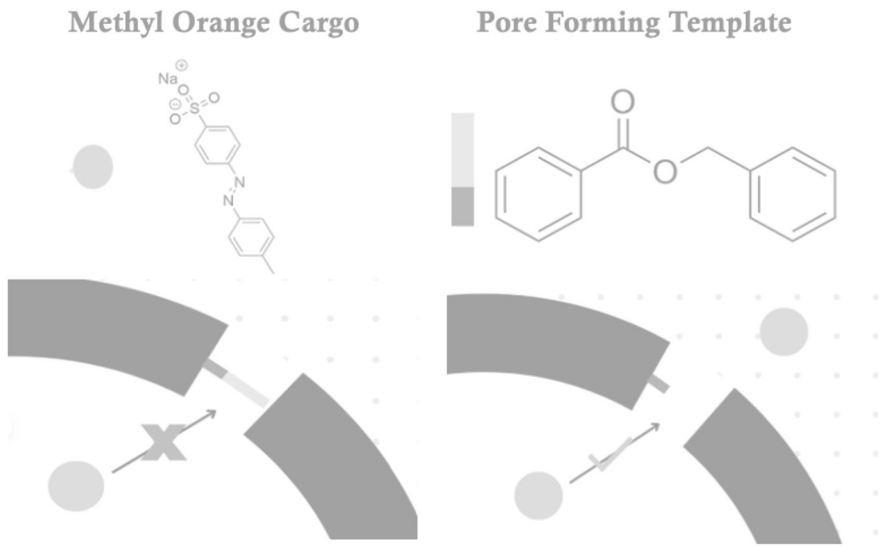






Pore Forming Template





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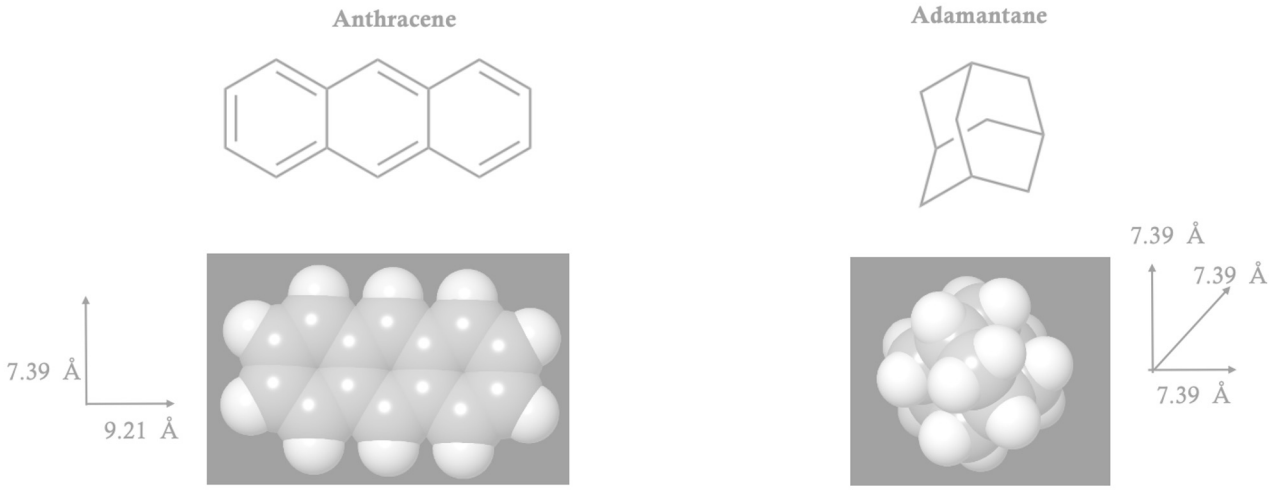
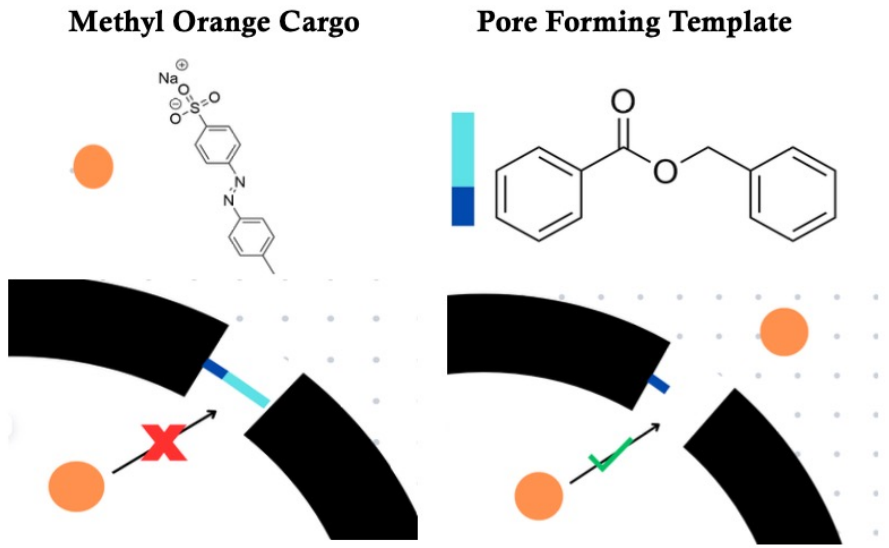
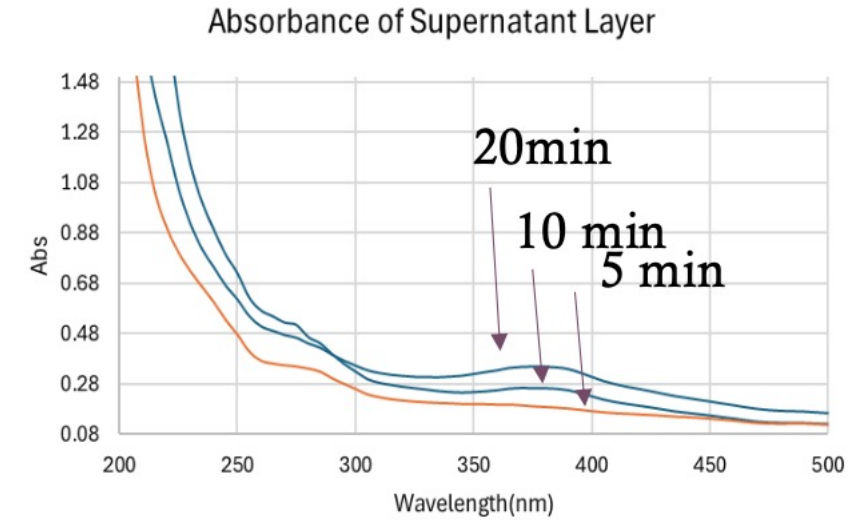
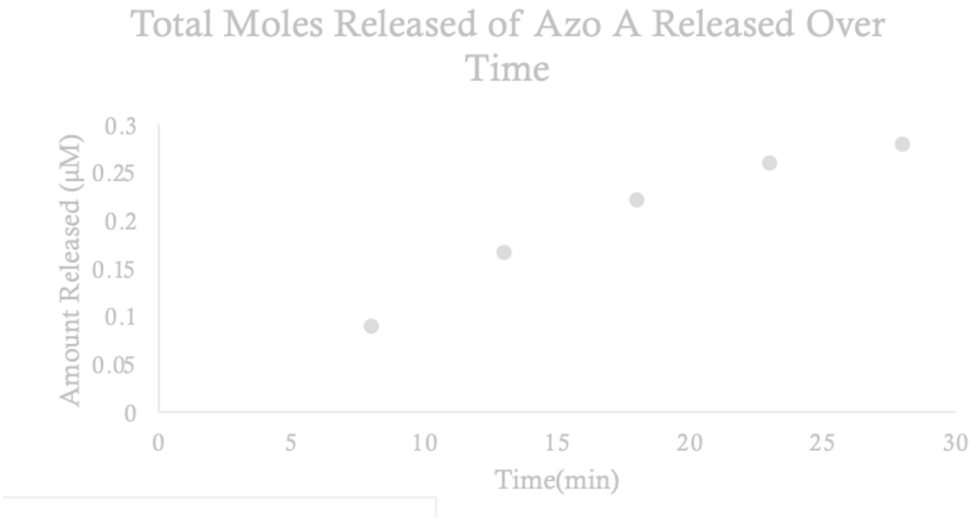


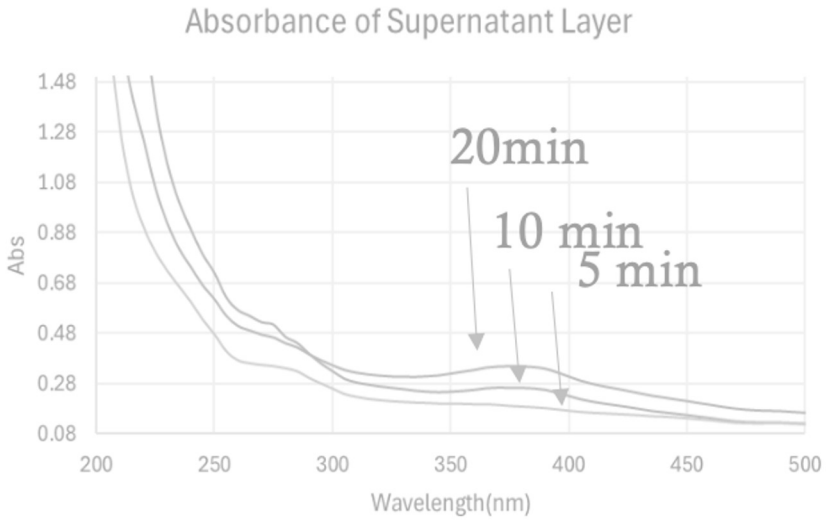


Conclusion


Absorbance of Supernatant Layer
Abs
1.48
1.28
1.08
0.88
0.68
0.48
0.28
0.08
200
250
300
350
400
450
500
Wavelength(nm)
20min
10 min
5 min


Total Moles Released of Azo A Released Over Time
Amount Released (µM)
0.3
0.25
0.2
0.15
0.1
0.05
0
0
5
10
15
20
25
30
Time(min)

Conclusion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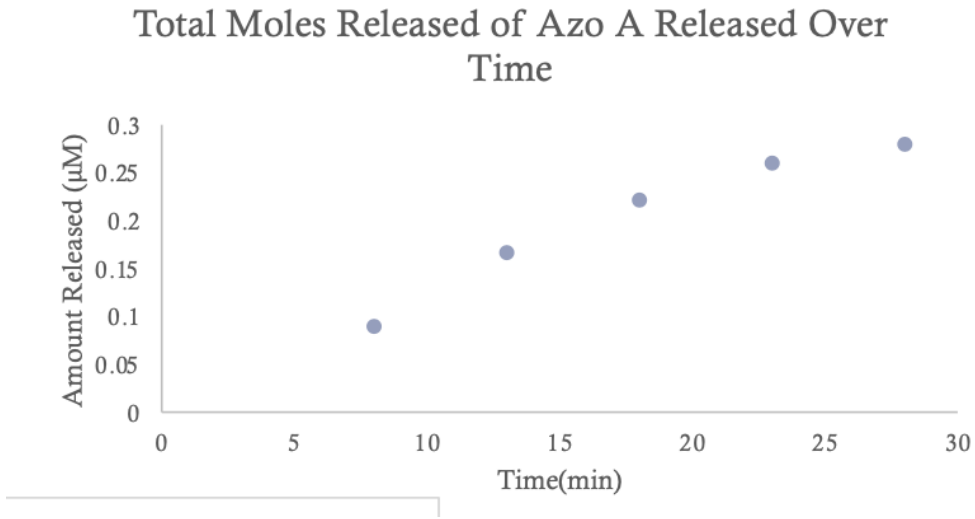
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Time(min)

Acknowledgements

Balam-Villarreal, J. A., et al. "π-Extended Push–Pull Azo-Pyrrole Photoswitches: Synthesis, Solvatochromism and Optical Band Gaps." *Organic & Biomolecular Chemistry*, vol. 18, no. 8, 2020, pp. 1657–1670, https://doi.org/10.1039/c9ob02410g. Accessed 2 Apr. 2026.

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Yang, Xingye, et al. "Optical Control of CRAC Channels Using Photoswitchable Azopyrazoles." *Journal of the American Chemical Society*, vol. 142, no. 20, 24 Apr. 2020, pp. 9460–9470, https://doi.org/10.1021/jacs.0c02949. Accessed 2 Apr. 2026.