





### **Conclusion**

The result suggests that a self-assembly complex between the PAN-stat-P4VP polymer and the retinoic acid was formed. The IR spectrum of the self-assembly shown in figure 5 provides evidence for the presence of retinoic acid in the complex but no signals of polymer in the complex. This could suggest that characteristic IR peaks of the polymer were embedded in the IR signals of retinoic acids. However, the carbon-13 NMR spectrum of the complex does show evidence for the presence of retinoic acid and polymer in the complex.

deposited colloids grew into flake shapes (see Figure 8). While using ethanol as the organic solvent, the deposited colloids grew into long strip shapes (see Figure 9). We anticipate that spherical shapes of PAN-stat-P4VP/RA on copper spheres can be observed by adjusting the organic solvent types and the molecular weights of the polymers, as the colloidal solution of PAN-stat-P4VP/RA was formed.

By exposing the deposited self-assembly on copper surfaces under polarized laser light, we found that the nanospheres of the PAN-stat-P4VP/MY are slightly deformed, which suggests that longer exposure time can be used for the future tests of the PAN-stat-P4VP/RA self-assemblies.

### References

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### Biography

Jessica Damon is currently a senior at the University of New Haven majoring in chemistry. After graduation, Jessica plans to attend pharmacy school to obtain a Pharm. D. degree. She is also a member of the University New Haven chapter of Health

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