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## Deuteration of Molecules and Macromolecules

Small-angle neutron scattering (SANS) has become a very powerful technique to obtain structural information of polymers, functional organic materials and biomolecules. With this technique, different kinds of deuterated molecules are needed to obtain a high signal-to-noise ratio and selectively highlight the desired parts in complex system. In recent work, we synthesized several deuterated monomers, lignin, ionizable lipids and phosphatidylcholine for SANS studies. To shorten the synthetic period of deuterated molecules, we also established a deuteration platform for amines and amides, which are key precursors of many polymers, biomolecules and drug molecules. These works will enhance our deuteration capability and attract more users for neutron experiments

### Topical Area

Biology and life sciences

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