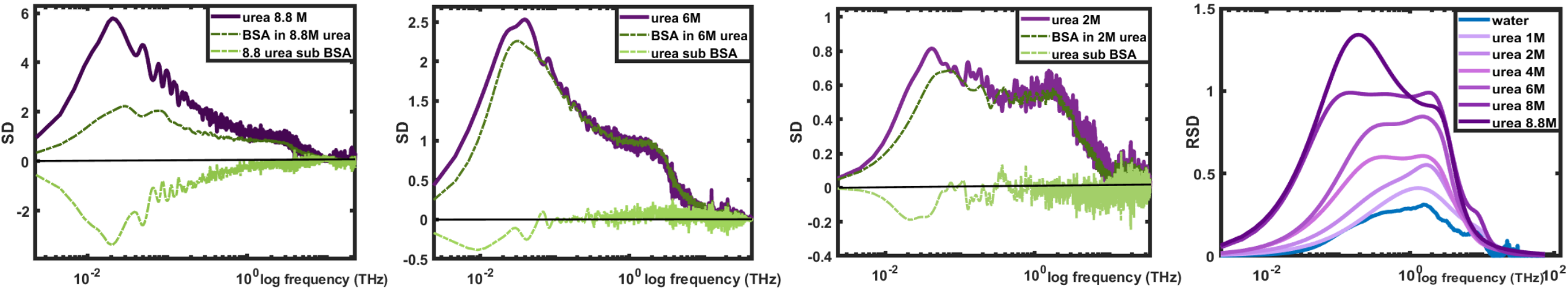


# P5043: Urea-Water dynamics in Proteins: An Ultrafast spectroscopic study

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- We used Optical Kerr Effect (OKE) spectroscopy to investigate the effect urea has on water structure and thereby elucidate the mechanism behind the urea denaturation of proteins.
- Urea at high concentration behaves as **chaotropic solute in water** but at low concentration has little or no effect on the structure of water.
- The mechanism behind protein denaturation depends on the concentration of urea in the solution and the type of protein used.
- At high concentrations of urea we see evidence of direct binding of urea with the protein. At lower concentrations, the indirect mechanism comes into play.**