

# 1 Probability distribution functions

The two-dimensional probability distribution functions (PDFs) for all parameters and all lipids from the X-ray reflectometry models are given in Figures 1-8. The two-dimensional probability distribution functions (PDFs) for all parameters and all lipids from the neutron reflectometry models are given in Figures 9-12.

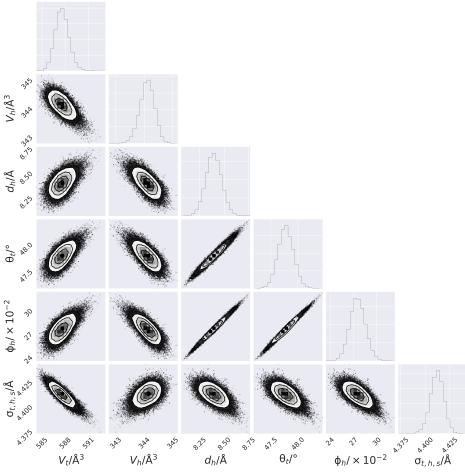


Figure 1: The multi-parameter PDFs for the chemically-relevant model of DLPC X-ray reflectometry data at the second-highest concentration. Figure files are available under MIT License.<sup>1</sup>

## References

- [1] A. McCluskey, *Figures for "Probabilistic determination of the effect of a deep eutectic solvent on the structure of lipid monolayers"*, 2018, [https://figshare.com/articles/\\_/6661784/0](https://figshare.com/articles/_/6661784/0).

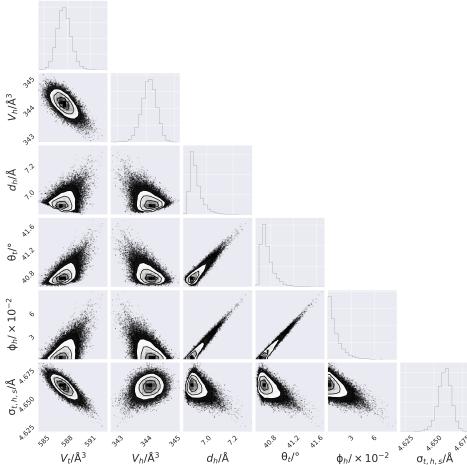


Figure 2: The multi-parameter PDFs for the chemically-relevant model of DLPC X-ray reflectometry data at the highest concentration. Figure files are available under MIT License.<sup>1</sup>

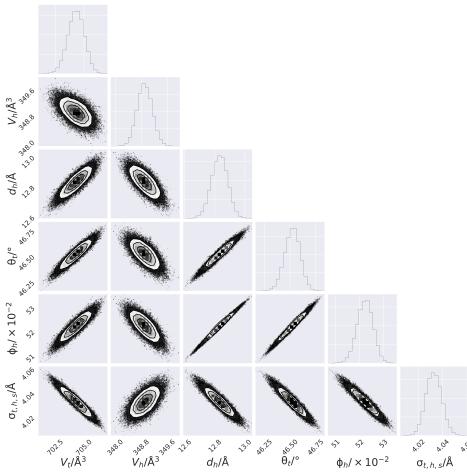


Figure 3: The multi-parameter PDFs for the chemically-relevant model of DMPC X-ray reflectometry data at the second-highest concentration. Figure files are available under MIT License.<sup>1</sup>

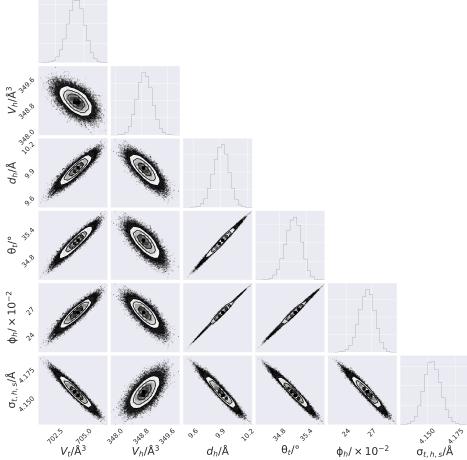


Figure 4: The multi-parameter PDFs for the chemically-relevant model of DMPC X-ray reflectometry data at the highest concentration. Figure files are available under MIT License.<sup>1</sup>

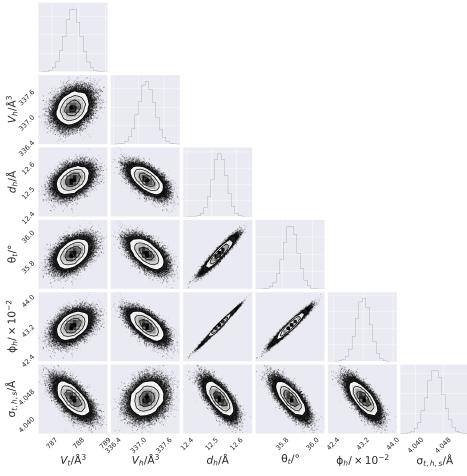


Figure 5: The multi-parameter PDFs for the chemically-relevant model of DPPC X-ray reflectometry data at the second-highest concentration. Figure files are available under MIT License.<sup>1</sup>

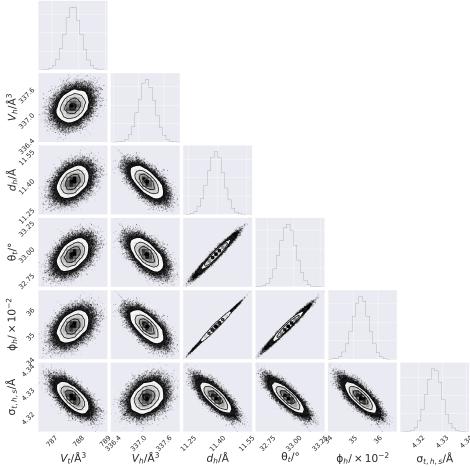


Figure 6: The multi-parameter PDFs for the chemically-relevant model of DPPC X-ray reflectometry data at the highest concentration. Figure files are available under MIT License.<sup>1</sup>

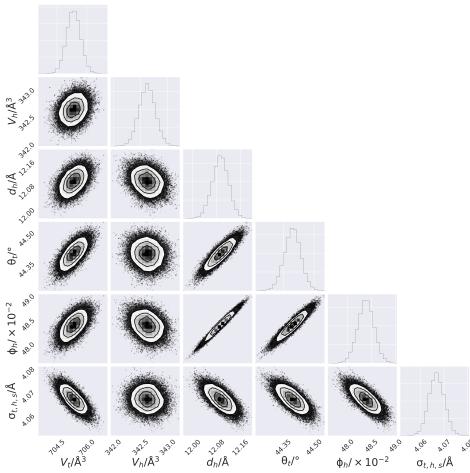


Figure 7: The multi-parameter PDFs for the chemically-relevant model of DMPG X-ray reflectometry data at the second-highest concentration. Figure files are available under MIT License.<sup>1</sup>

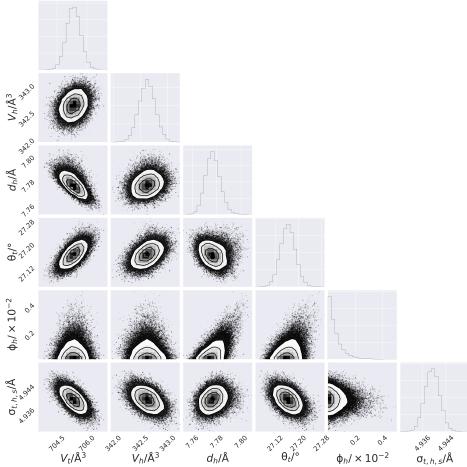


Figure 8: The multi-parameter PDFs for the chemically-relevant model of DMPC X-ray reflectometry data at the highest concentration. Figure files are available under MIT License.<sup>1</sup>

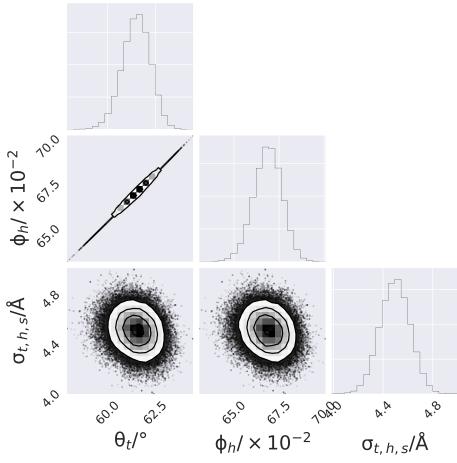


Figure 9: The multi-parameter PDFs for the chemically-relevant model of DMPC/h-DES neutron reflectometry data. Figure files are available under MIT License.<sup>1</sup>

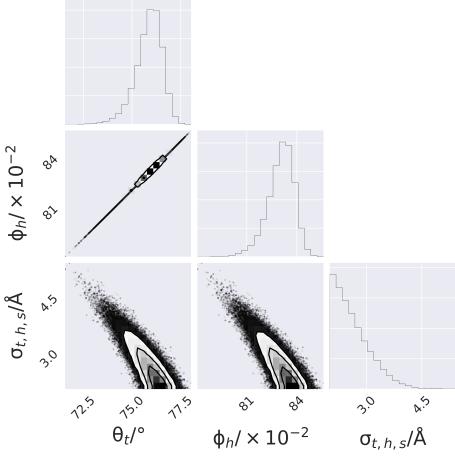


Figure 10: The multi-parameter PDFs for the chemically-relevant model of DMPC/hd-DES neutron reflectometry data. Figure files are available under MIT License.<sup>1</sup>

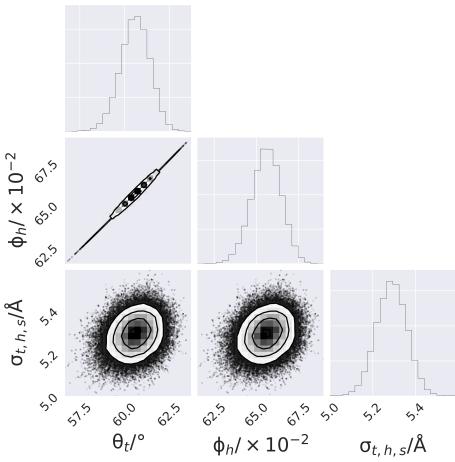


Figure 11: The multi-parameter PDFs for the chemically-relevant model of DPPC/h-DES neutron reflectometry data. Figure files are available under MIT License.<sup>1</sup>

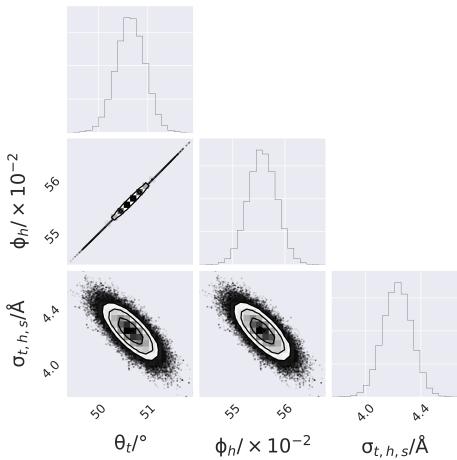


Figure 12: The multi-parameter PDFs for the chemically-relevant model of DPPC/hd-DES neutron reflectometry data. Figure files are available under MIT License.<sup>1</sup>