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pydls

A Package for Bayesian Inference of Particle Size
Distributions in Dynamic Light Scattering
Experiments

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1 Dynamic Light Scattering

Dynamic light scattering (DLS) is a technique used to determine the size distribution of a sample of particles suspended in an optically transparent medium, also known as a colloidal sample. When incident light is directed towards a colloidal sample, each particle within the sample scatters the incident light independently and this same process repeats for all of the particles within the sample.

1.1 Theoretical Background

1.2 Proposed Algorithm

2 Development

2.1 From Data to Distribution

2.2 Single Exponential Fit

2.3 Unimodal Distribution Tests

2.4 Bimodal Distribution Tests

2.5 Experimental Data Tests

3 Conclusion