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A multiscale framework for large deformation modeling of RBC membranes

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Highlights

- An atomistically enriched multiscale framework for nonlinear modeling is proposed.
- Bridging between Cauchy-Born rule and element-free IMLS-Ritz method is derived.
- Large deformation of RBC membranes is studied.
- The presented approach can be easily generalized for other membrane structures.
- The formulation gives a more precise prediction at a lower computational cost.

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