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Analytical network-averaging of the tube model: Strain-induced crystallization in natural rubber

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Highlights

- A novel constitutive model for SIC is proposed, because all previous models deviate from calorimetric experimental data.
- All parameters for the crystallization kinetics can be directly taken from physical measurements.
- Crystallization nucleation and growth are bounded.
- The model automatically transforms to our theories on rubber elasticity and mechanically-induced chemiluminescence.

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