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A $\mathfrak{sl}(2)$ tangle homology for dotted, seamed cobordisms

We construct a $\mathfrak{sl}(2)$ Bar-Natan like tangle homology for dotted, seamed cobordisms with $\mathbb{Z}[a]$ coefficients. This theory is functorial under link cobordisms. A version of the original Khovanov Homology corresponds to the choice $a = 0$. Likewise, for $a = -1$ we recover Lee's theory.