A measure to quantify the degree of cooperativity in overall titration curves

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Highlights

- A measure to quantify cooperativity of titration curves which is based on a minimal energy approach is introduced
- It is in line with the qualitative definition of cooperativity by the existence of non-real roots of the binding polynomial
- Polynomial factorizations give upper bounds for the degree of cooperativity
- Modifications of the approach are presented which allow us to distinguish between positive and negative cooperativity or to incorporate knowledge on the binding mechanism