

Abstract Submitted  
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**Instabilities in Polar Magnetic Suspensions** AMIR NOURHANI,  
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stability of an active suspension of polar motile micromagnets is analyzed theoret-  
ically. We formulate the collective dynamics using a kinetic continuum model and  
Fokker-Planck formalism. Using a perturbation analysis, we obtain governing equa-  
tions to leading order in polar length and study the stability of the suspension and  
transition from disordered to ordered state using linear stability analysis.

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