

Abstract Submitted  
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**Plasma Wave Instabilities in Non-Equilibrium Graphene** CHINTA

ARYAL, BEN HU, The University of Akron, Akron, Ohio, USA — We study the two-stream instability in a doped graphene system, into which a stream of energetic electrons is injected. By using the established theory of the instability in classical plasmas, we study the generation of unstable waves (amplitudes which grow with time) in limit of zero of magnetic field and at low temperatures. We determine the range of wave-vectors of waves that are unstable, and we find no instability for waves with wave-vectors parallel or perpendicular to the direction of the injected carriers. We also find that in general, the instability increases with increasing angle between the wave-vector of the wave and the direction of injection of carriers.

Chinta Aryal  
The University of Akron

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