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Strong inhibition of convection in Dirac semimetals

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It is shown that the convective instability in electron fluids in 3D and 2D Dirac semimetals is strongly inhibited. The major obstacles for the convection are the effects of the Coulomb forces and the momentum relaxation related to the interaction with impurities and phonons. The effect of the Coulomb forces is less pronounced in 2D materials, such as graphene. However, momentum relaxation still noticeably inhibits convection making it very difficult to achieve in practice.

Is this abstract from experiment?

No

Name of experiment and experimental site

N/A

Is the speaker for that presentation defined?

Yes

Details

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Internet talk

Yes

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