

Abstract Submitted
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Landau levels of bilayer transition metal dichalcogenides PENG PENG ZHENG, Univ of Texas, Dallas, FAN ZHANG, Professor/mentor — The quantum binary system at low temperature is not limited to only spin, but that of valley and layer degrees of freedom as well. A prime example is bilayer transition metal dichalcogenide (TMD). Here we examine the Landau level structure of bilayer TMD. We show how the interlayer electric field and the magnetic Zeeman field couple and control the layer and valley pseudospins, respectively, thereby tuning the Landau levels. Our results shed a new light on the quantum Hall effects of atomically thin TMD's.

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