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Variation of electronic and magnetic properties of bilayer zigzag graphene nanoribbons by sliding and electric field[1] RAMAZAN TUGRUL SENGER, MEHMET YAGMURCUKARDES, Izmir Inst of Tech — Structural, electronic and magnetic properties of bilayer zigzag graphene nanoribbons (BZGNR) are studied using density functional theory methods. We find that ground state stacking geometry of the layers depends on the width of BZGNR. Energy bandgap , edge-localized magnetic moments and the magnetic ordering are all modified by mechanical sliding of the layers and/or by external applied electric fields. These effects can be utilized in design of electro-mechanical and magneto-mechanical nano devices.

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