Supporting Information

Phase Control of Graphene Nanoribbon by Carrier Doping: Appearance of Noncollinear Magnetism

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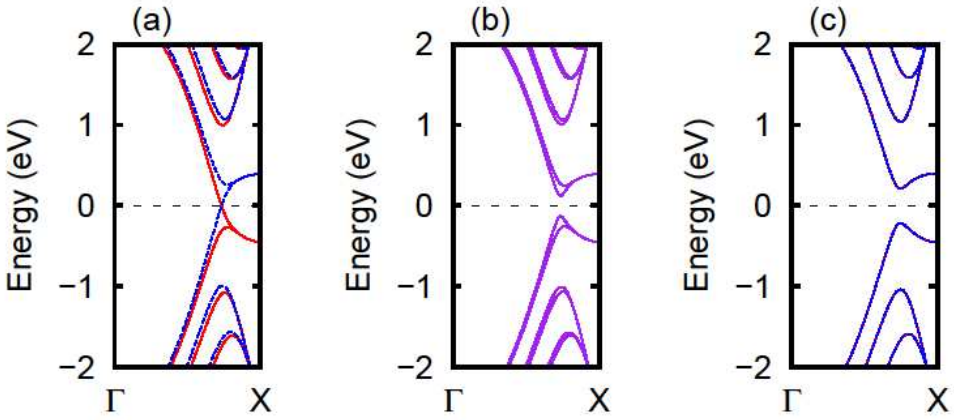

Figure S1. Band structures of collinear and noncollinear magnetic states in ZGNR. (a), (b) and (c) show the band structure of PIES ($\theta = 0°$), CIES ($\theta = 90°$) and APIES ($\theta = 180°$) states, respectively. In (a) and (b), the red solid and blue dashed lines denote the up and down spin states, respectively. The Fermi level is located at $E_F = 0$.