Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Supporting Information for 'Metallic three-coordinated carbon networks with eight-membered rings showing high density of states at Fermi level'

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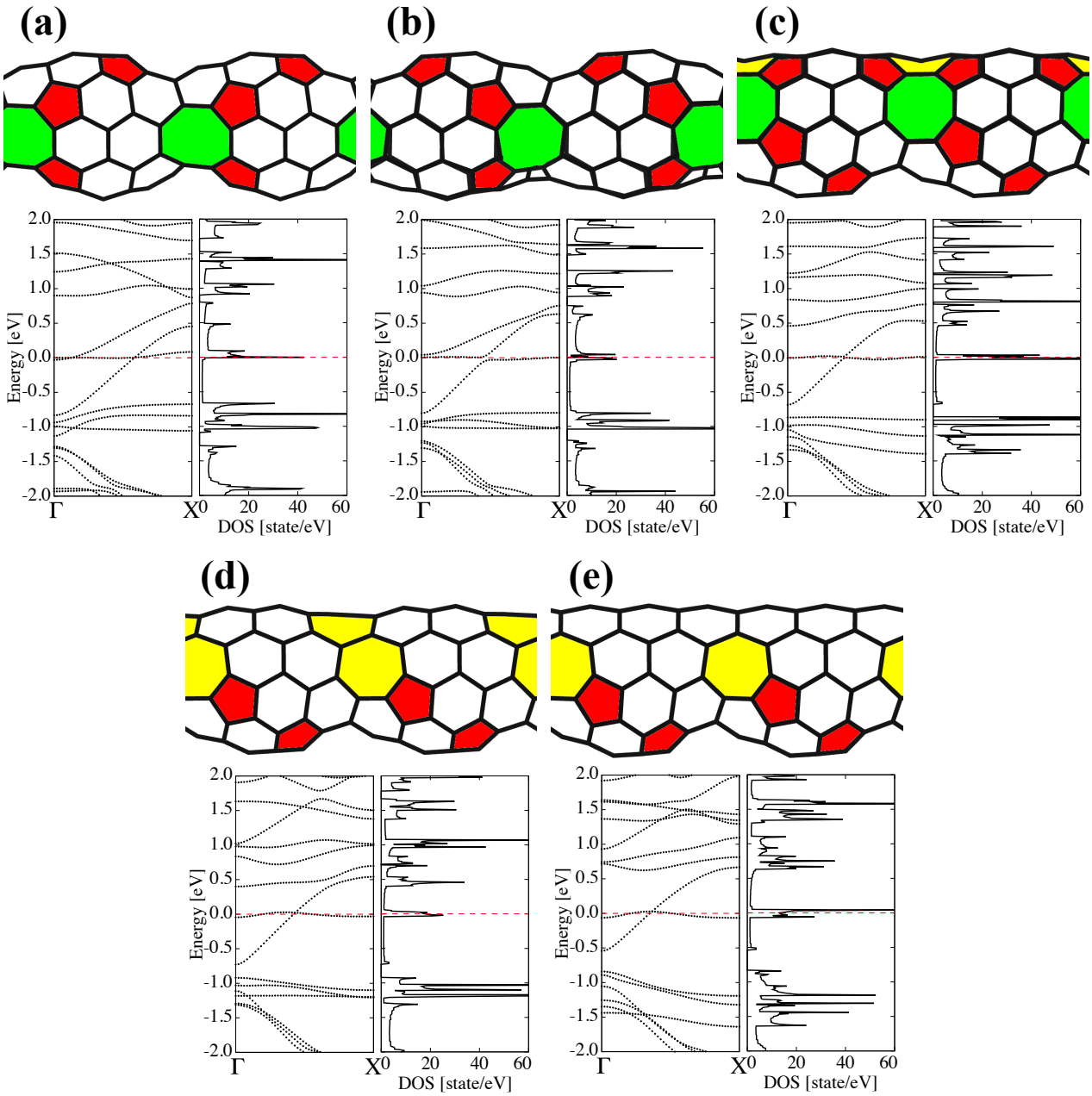

Figure S1: Geometrical structure, electronic dispersion curves along the Γ-X direction and DOS of one-dimensional (1D) peanut-shaped fullerene polymers (PSFPs). These models, (a), (b), (c), (d), and (e) are different from each other, and they have eight-membered rings adjoined to two five-membered rings (i.e., Mickey Mouse-shaped defects).

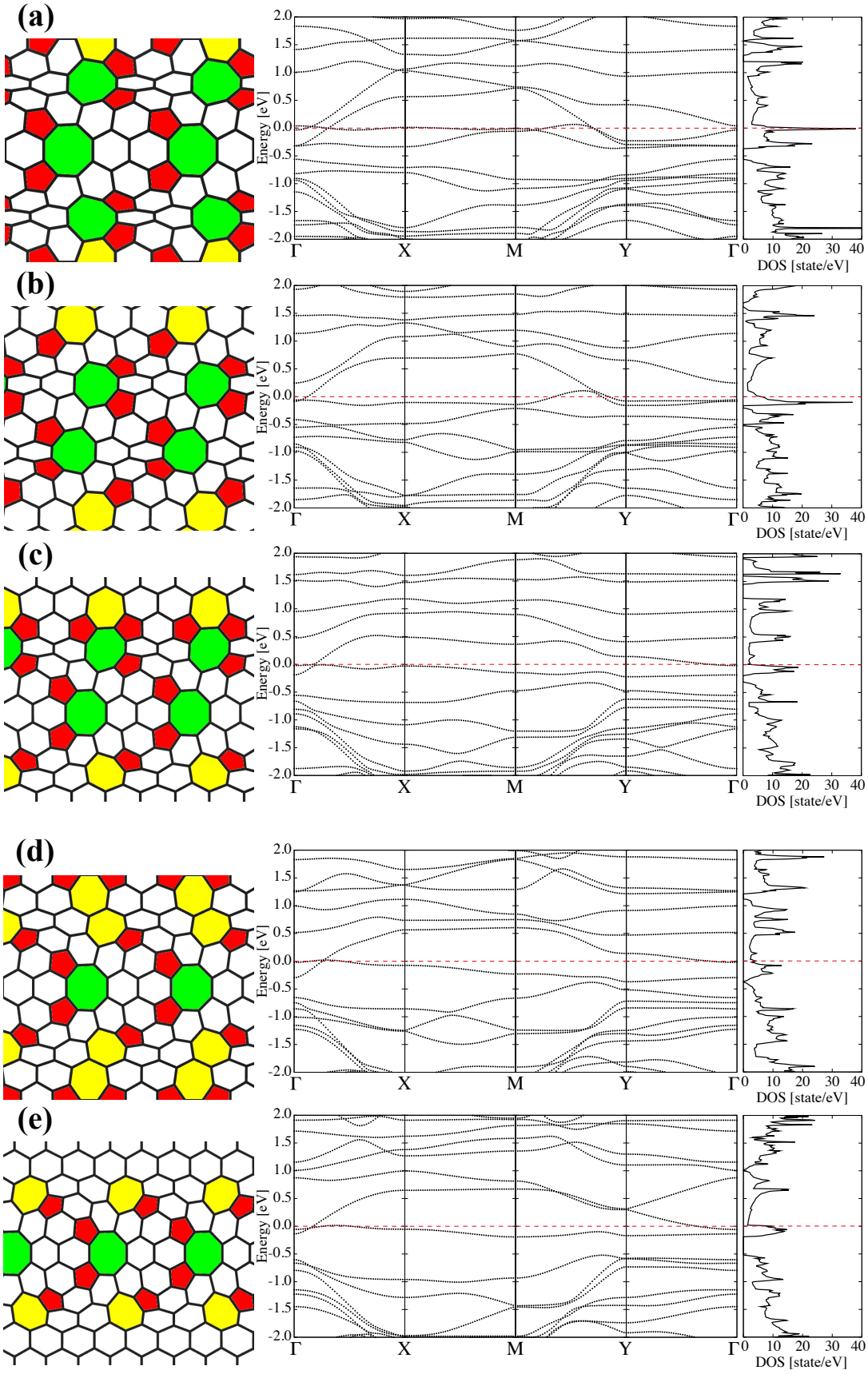

Figure S2: Geometrical structure, electronic dispersion curves along the Γ-X-M-Y-Γ directions and DOS of corrugated graphene sheets with Mickey Mouse-shaped defects that are periodically aligned parallel to the y-direction. These models are created by unzipping 1D PSFPs, (a), (b), (c), (d), and (e) in Figure S1 along the tube axis and repeat the pattern periodically, respectively.