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Near-field study of domain walls in bilayer graphene LILI JIANG, ZHIWEN SHI, FENG WANG, Univ of California - Berkeley — Domain wall in bilayer graphene is emerging as a fascinating one-dimensional system due to the presence of structural soliton and electrically valley Hall boundary states. They are expected to process unusual electronic and optical properties because of the modification of atomic structures. We systematically study the bilayer graphene domain walls with different configurations including lines, circles and networks using scanning near-field optical microscopy (SNOM). The SNOM technique provides a convenient way to investigate domain walls in ambient condition. Our results suggest that bilayer graphene domain wall is an interesting and rich system for fundamental research about light-matter interactions.

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