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Melon: A carbon-nitride analog to graphene JOEL THERRIEN, YANCEN LI, ECE U. Mass Lowell, DANIEL SCHMIDT, Plastics Eng U Mass Lowell — Although graphene remains the premier 2-D material, many others have been shown to exist. A close analog to graphene would be a two-dimensional sheet composed of carbon and nitrogen, known as melon. Bulk melon, also known as graphitic carbon-nitride, has been successfully synthesized and shown to be an organic semiconductor with a band-gap around 2.7 eV. We report on the successful synthesis of single layer and few layer melon. The physical and electrical characteristics of this close cousin to graphene will be presented along with the synthesis method.

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