

Supplementary information

One-dimensional assembly of β -form anhydrous guanine microrods

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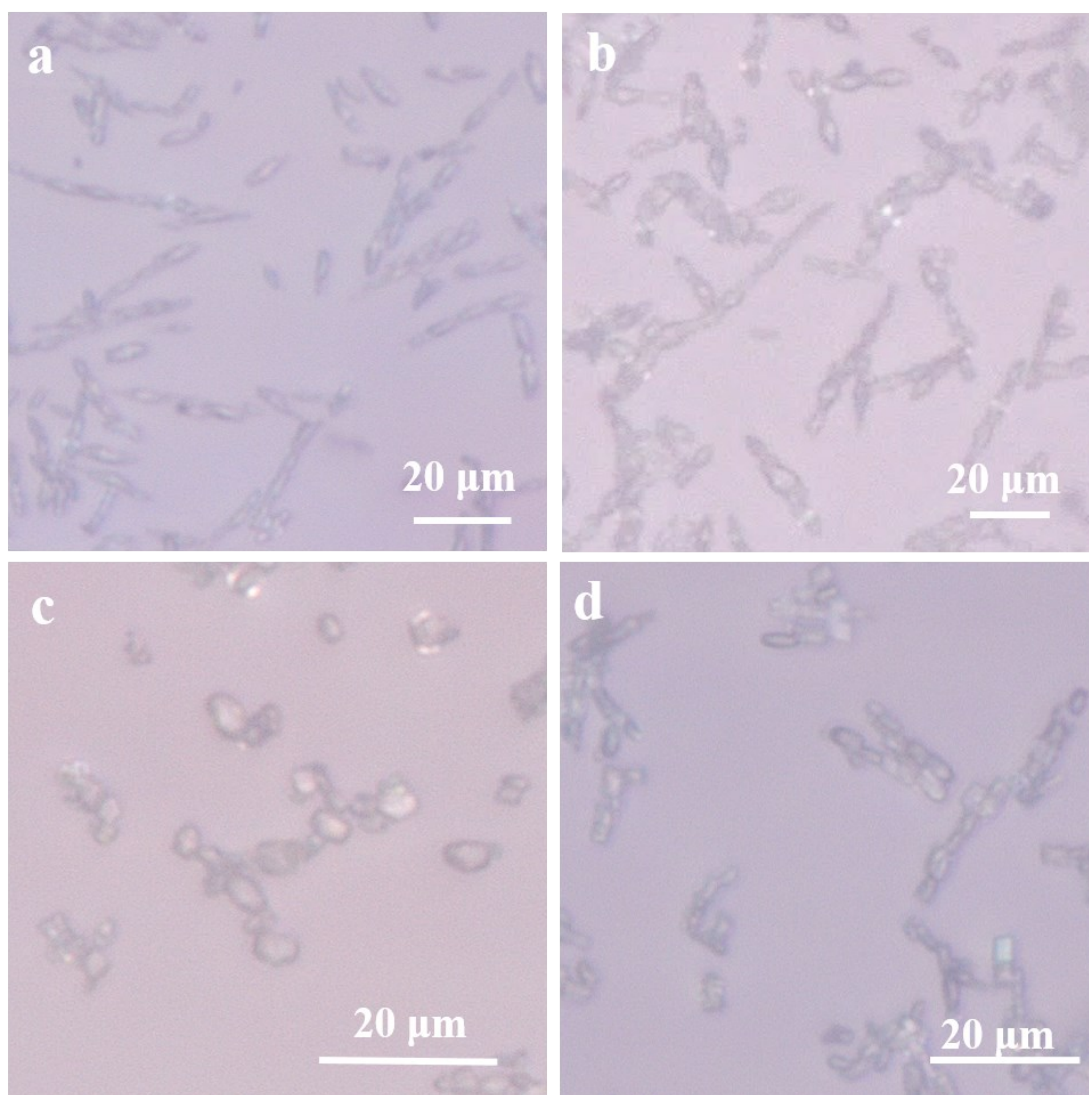


Fig. S1 The optical microscope images of the 1D assembly of guanine microrods formed in four systems. (a) Standard system. (b) Py system. (c) NVP system, and (d) NMP system.

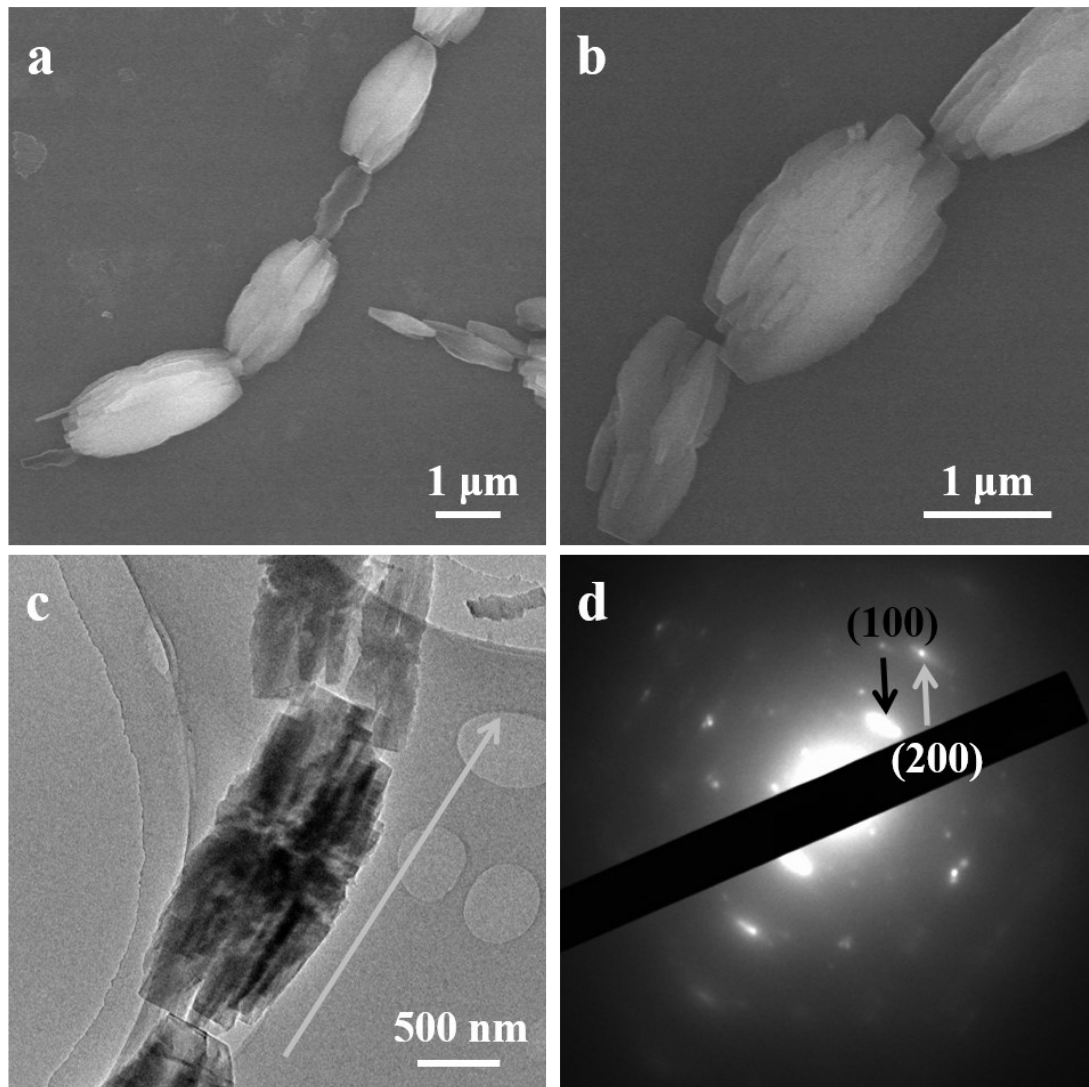


Fig. S2 Characterizations of β -AG microrods formed in standard system. (a, b) SEM, (c) TEM images. (d) SAED pattern of one guanine microrod shown in (c). The point pointed by the black arrow represents the (100) plane.

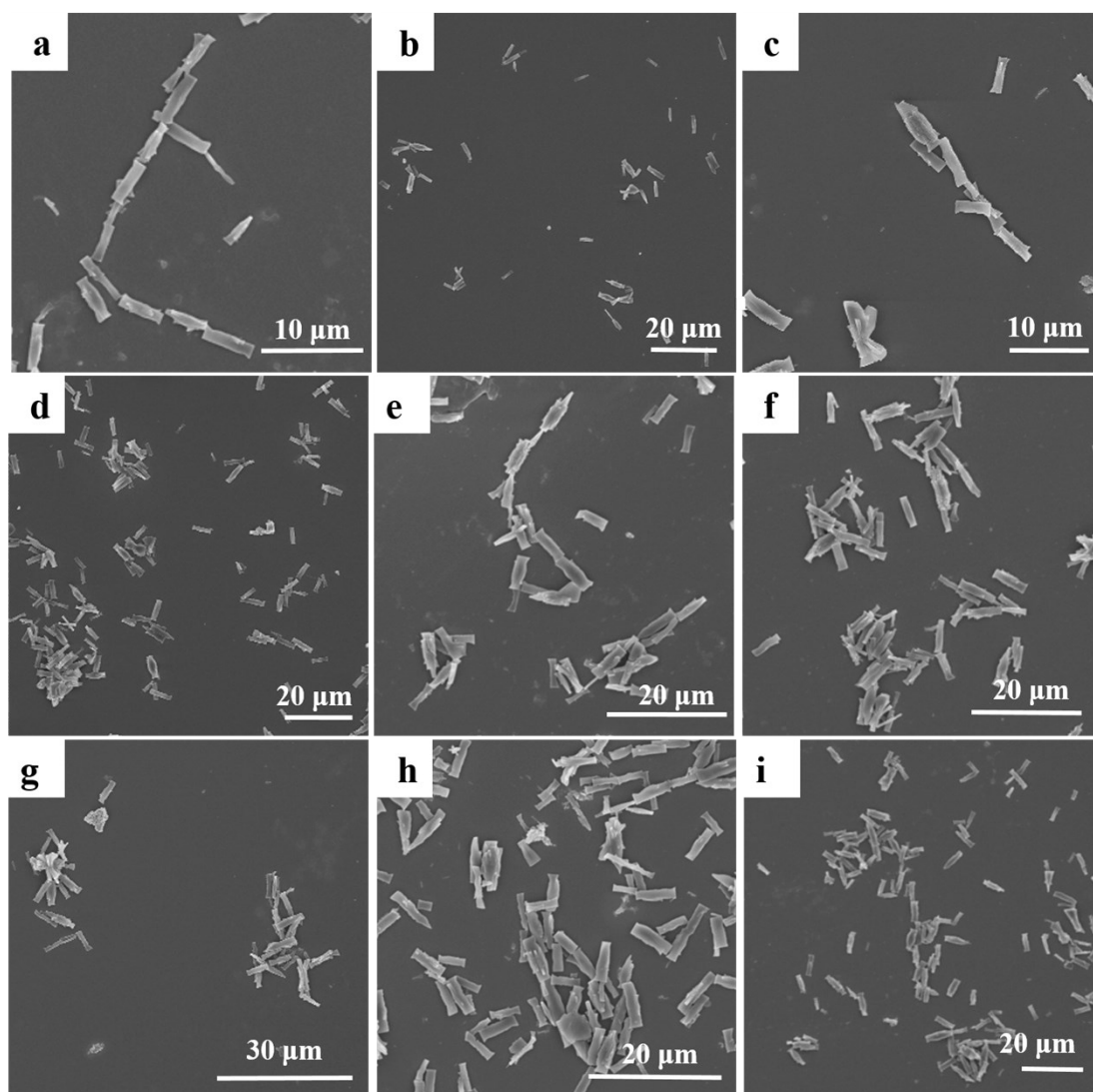


Fig. S3 Reversible and irreversible process of the 1D guanine assemblies of β -AG microrods formed in Py system by using SEM. (a-c) Reversible assembly of β -AG microrods in water and acetone. (a) 1D assembly forms in water. (b) 1D structures of β -AG microrods disassembly in acetone. (c) Reversible 1D assembly can be observed in water again after being treated in acetone. (a, d, e) Similar reversible process in water and isopropanol. (a, f, g) Irreversible assembly of β -AG microrods in water and dichloroethane. (f) 1D structures of β -AG microrods disassembly in dichloroethane. (g) No 1D assembly can be observed in water again after being treated in dichloroethane. (a, h, i) Similar irreversible process in water and petroleum ether.

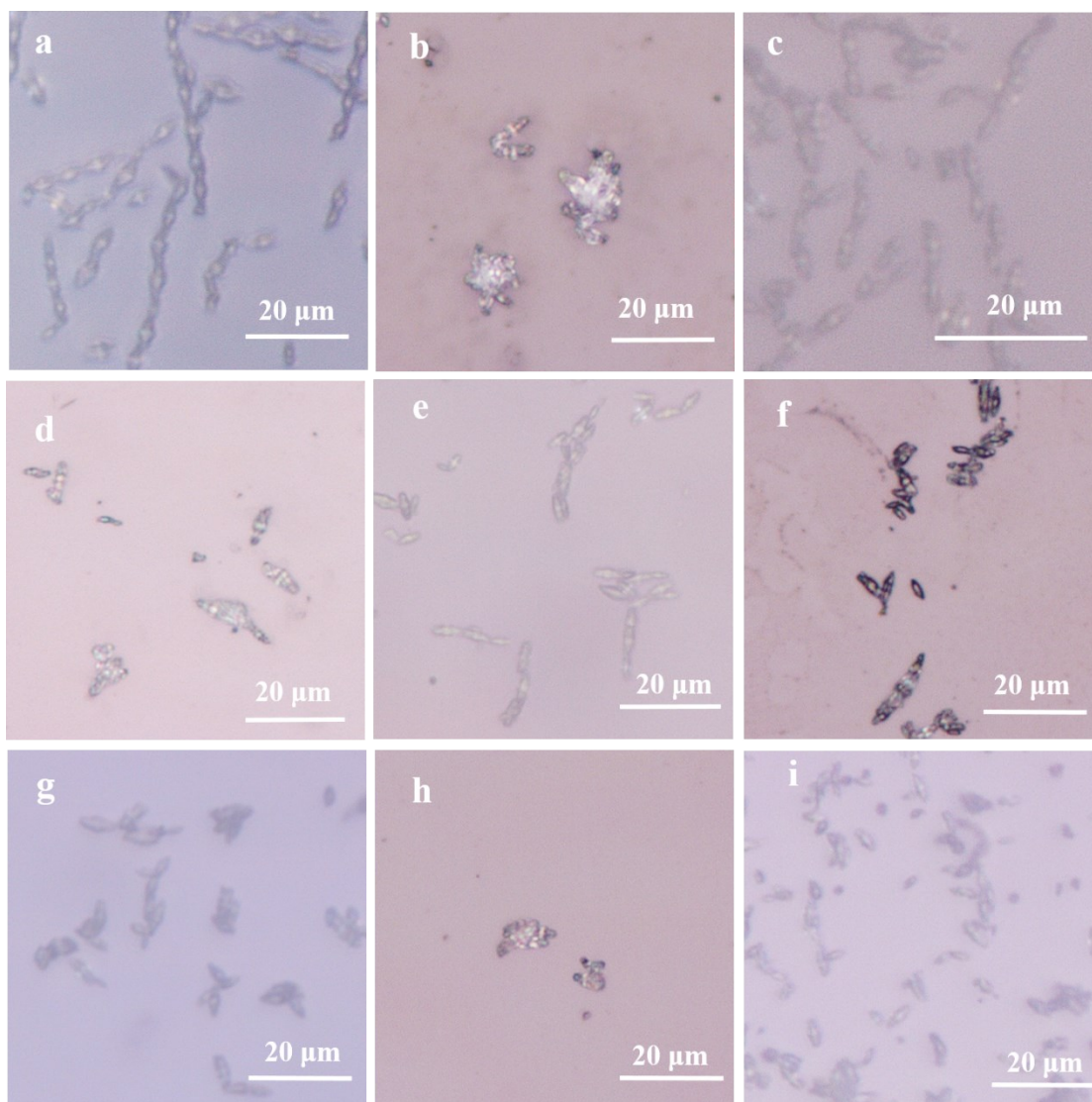


Fig. S4 Reversible and irreversible process of the 1D guanine assemblies of β -AG microrods formed in Py system by using LM. (a-c) Reversible assembly of β -AG microrods in water and acetone. (a) 1D assembly forms in water. (b) 1D structures of β -AG microrods disassembly in acetone. (c) Reversible 1D assembly can be observed in water again after being treated in acetone. (a, d, e) Similar reversible process in water and isopropanol. (a, f, g) Irreversible assembly of β -AG microrods in water and dichloroethane. (f) 1D structures of β -AG microrods disassembly in dichloroethane. (g) No 1D assembly can be observed in water again after being treated in dichloroethane. (a, h, i) Similar irreversible process in water and petroleum ether.

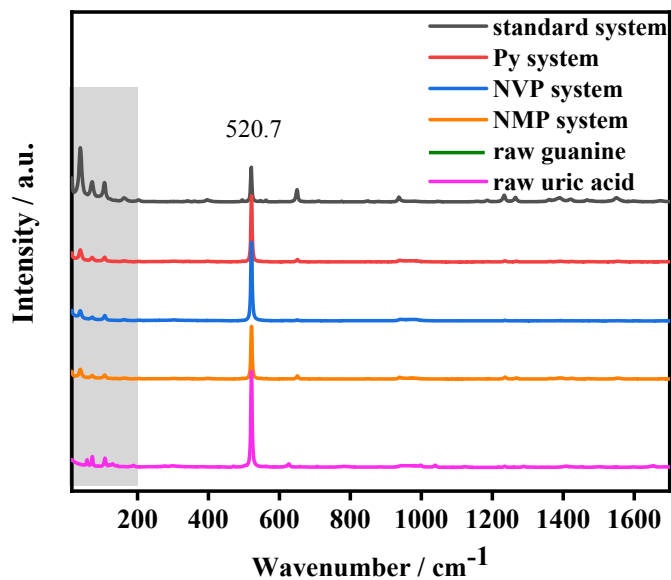


Fig. S5 Raman spectra of the guanine microrods prepared in four systems: Standard system (black curve), Py system (red curve), NVP system (blue curve) and NMP system (orange curve), raw guanine (green curve) and raw uric acid (pink curve) Raman spectra with wavenumber ranging from 15 to 1700 cm⁻¹.