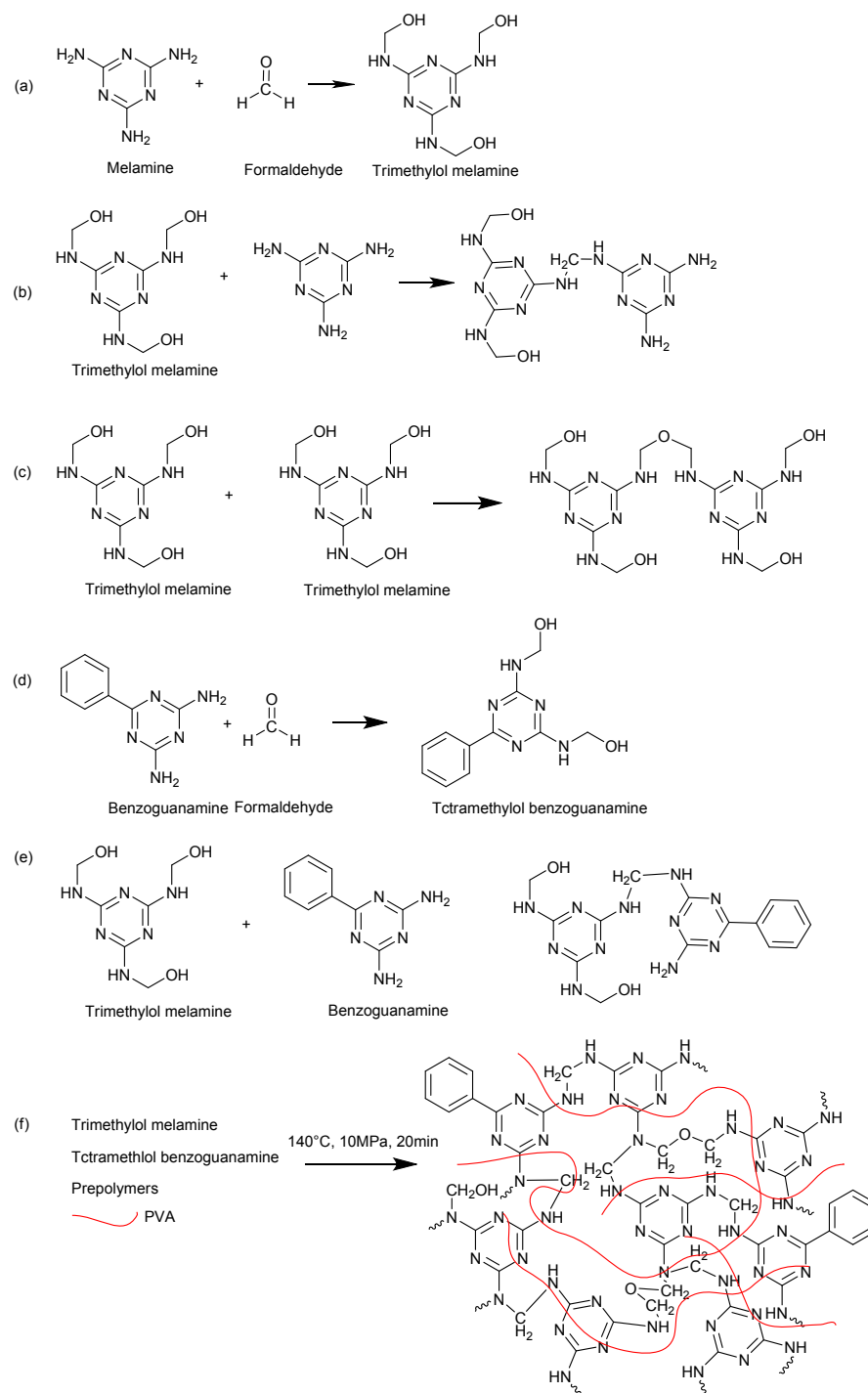


Supporting information



**Scheme S1** The proposed mechanism of prepared modified MF resins reaction. (a) Methylation of melamine with formaldehyde; (b) prepolymer formation of trimethylol melamine and melamine; (c) methylation of benzoguanamine with formaldehyde; (d) methylation of benzoguanamine with formaldehyde; (e) prepolymer formation of trimethylol melamine and benzoguanamine; (f) formation of Modified MF Resin/PVA semi-IPN composite.