Supplementary Information (SI) for New Journal of Chemistry.

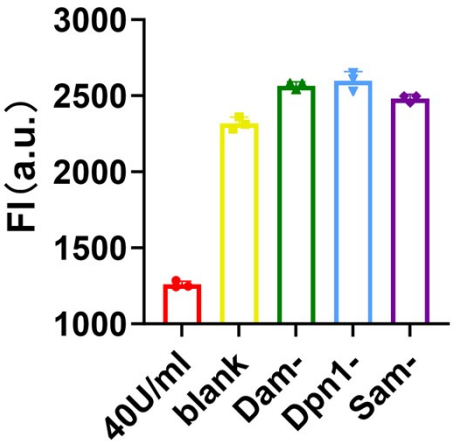

Figure S1. The difference in fluorescence intensity at 650 nm with an excitation wavelength of 616 nm in different conditions: control (yellow column), 40 U/mL Dam MTase (red column), without Dam MTase (green column), without DpnI (blue column) and without SAM (purple column).

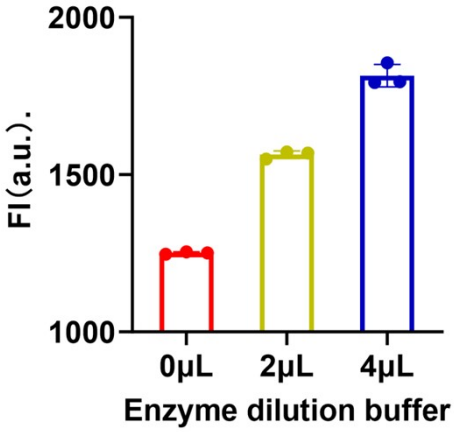

Figure S2. Fluorescence spectra corresponding The effect of enzyme storage solution on the reaction system. An additional 0μL, 2μL, 4μL of glycerol-containing enzyme dilution buffer was added to the reaction system.

Figure S3. The fluorescence under the UV lamp with an excitation wavelength of 616nm with different concentrations of Dam MTase, from a to g, 40, 4, 0.4, 4×10^{-2}, 4×10^{-3}, 4×10^{-4}, 0 U/mL, respectively.

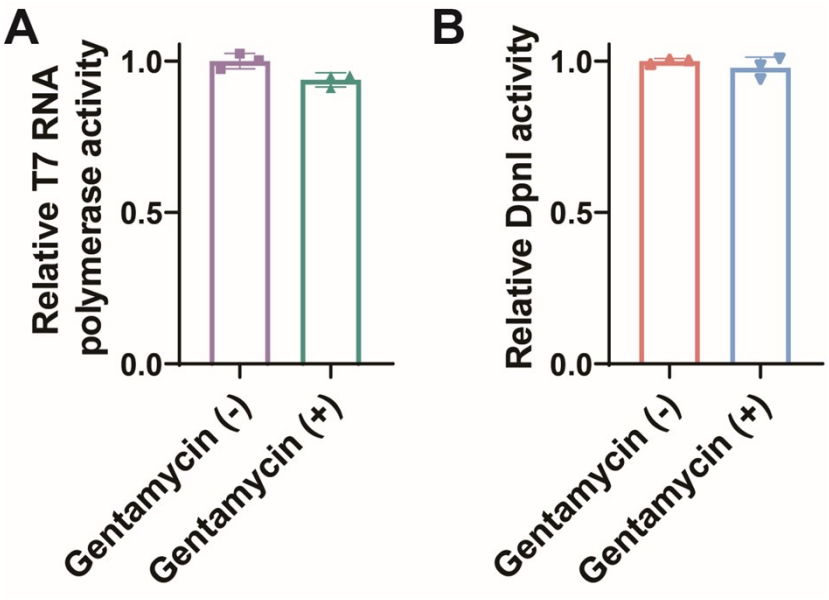

Figure S4. (A) Add gentamycin (5 μM) in the transcription stage. The relative T7 RNA polymerase activity in different conditions: without gentamycin (purple column), with gentamycin (green column). (B) Add gentamycin (5 μM) in the cleavage stage after methylation by Dam MTase (40 U/mL). The relative DpnI activity in different conditions: without gentamycin (red column), with gentamycin (blue column). Error bars represent the standard deviation of the three replicates.

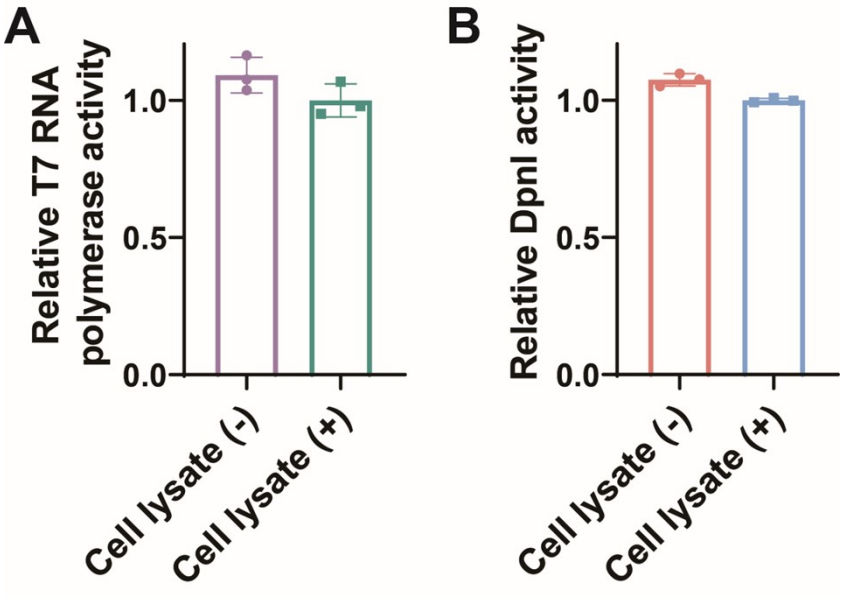

Figure S5. The influence of the cell lysate on DpnI and T7 RNA polymerase. (A) The relative T7 RNA polymerase activity in different conditions: without cell lysate (purple column), with cell lysate (green column) (A) Add cell lysate (2 μL) in the cleavage stage after methylation by Dam MTase (40 U/mL). The relative DpnI activity in different conditions: without cell lysate (red column), with cell lysate (blue column). Error bars represent the standard deviation of the three replicates.

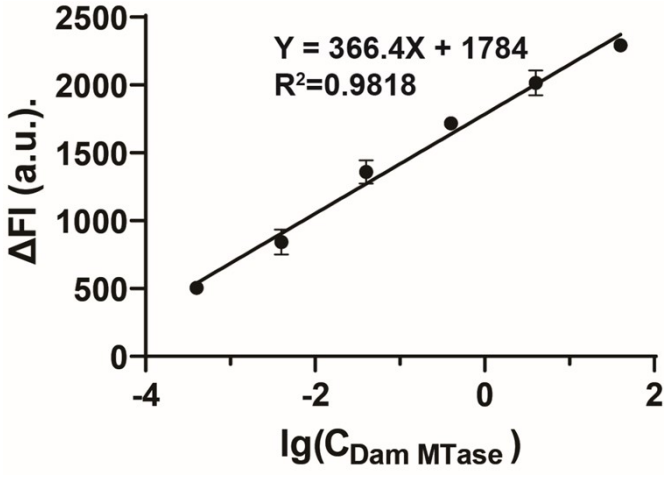

Figure S6. The linear correlation of the fluorescence intensity versus $lgC_{Dam\ MTase}$ with the equation being: $\Delta F = 366.4 \times lgC_{Dam\ MTase} + 1784$ (R^2=0.9818)