



## Priming effects in a subtropical forest soil

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Priming effects can accelerate decomposition of soil organic carbon (SOC) and thus have great potential to change SOC dynamics. Although temperature and addition of fresh substrates could affect the intensity and direction of priming, it remains unclear how their interactions affect priming. Therefore we conducted an incubation experiment using a subtropical forest soil. We incubated the soil for 10 days at two temperatures: 15°C and 25°C, with four treatments: CK (only adding water), G (13C-glucose addition), NT (13C-glucose and nitrate additions) and AM (13C-glucose and ammonium additions). The results showed that glucose addition significantly accelerated the decomposition of SOC in both temperatures, indicates that positive priming occurs in this subtropical soil. While negative priming was observed in soils with simultaneous additions of glucose and nitrogen addition, especially at 25°C. The effect of temperature on PE was not significant. This indicates that mining of nitrogen is a major mechanism responsible for priming in this subtropical soil and there is no strong interaction between temperature and substrate additions to induce priming.