

## Supplementary materials

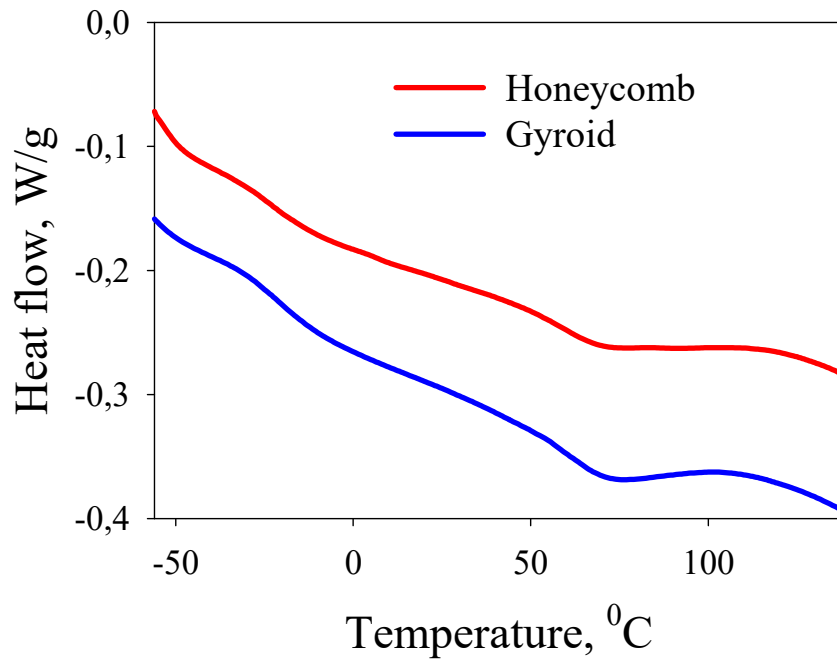


Figure 1S. DSC curves of lattice flexible TPU with honeycomb and gyroid architecture.

The recovery degree of lattice flexible TPU after compression tests was determined by the formula:  $R_r = \left( \frac{h_{current}}{h_{initial}} \right) \times 100\%$ , where  $h_{current}$  is the current value of the sample height after unloading,  $h_{initial}$  is the initial value of the sample height before loading.

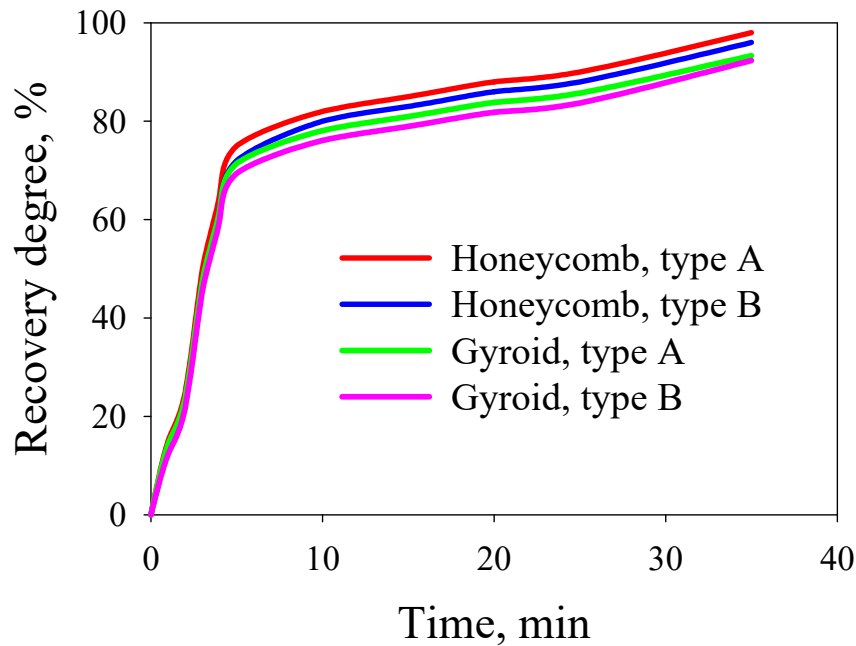


Figure 2S. The recovery degree of lattice flexible TPU with honeycomb and gyroid architecture over time after the compression tests.