

Supplementary

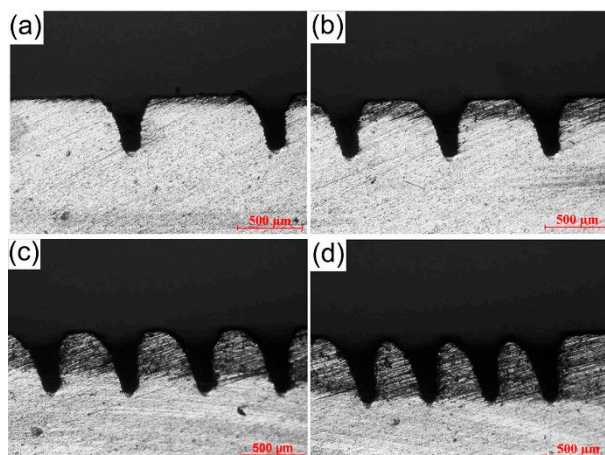


Figure S1. The created grooves on Ti6Al4V surface with structure density of 25% (a), 42% (b), 58% (c), and 75% (d), respectively.

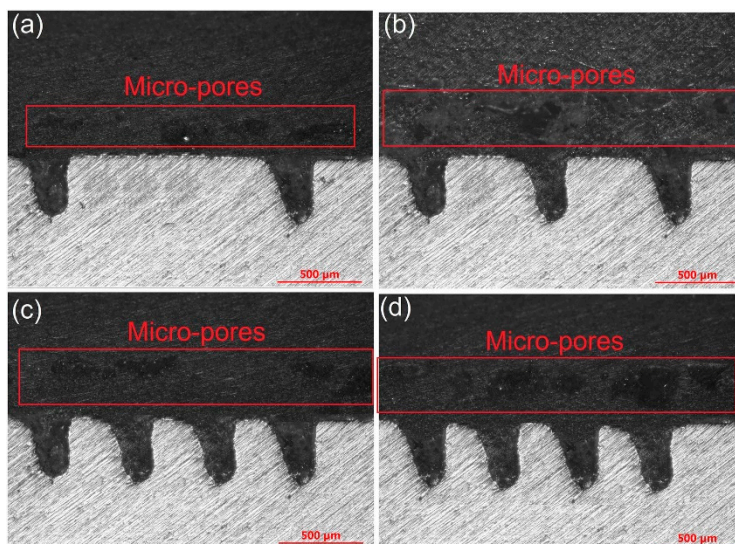


Figure S2. Cross-sections of LAMP produced joints with structure density of 25% (a), 42% (b), 58% (c), and 75% (d), respectively.

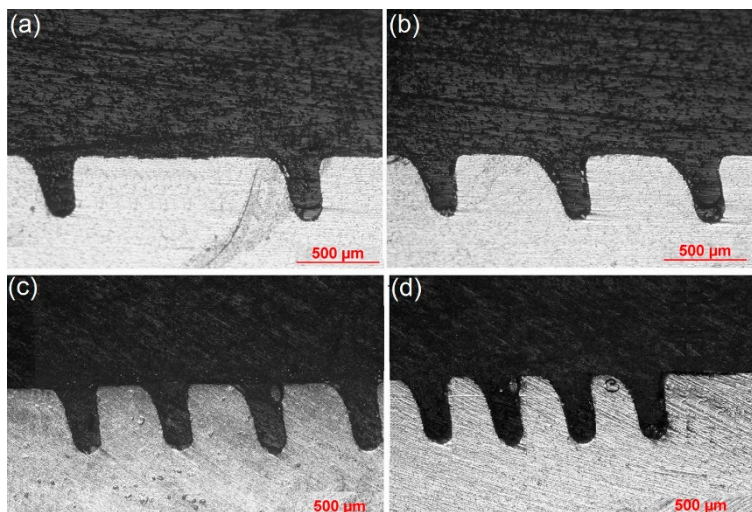


Figure S3. Cross-sections of the modified laser joining method produced Ti6Al4V-PA66-GF30 joints with structure density of 25% (**a**), 42% (**b**), 58% (**c**), and 75% (**d**), respectively.