

Selective laser assisted chemical etching of aluminum nitride

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Single crystal of aluminum nitride (AlN) has a high thermal conductivity and is an electrical insulator, and is a great candidate material for UV-LED, UV-LD, power converter, RF-HEMT and so on. In this research, we suggest the selective laser assisted chemical etching of aluminum nitride for high resolution material processing. The result is indicated that the processing from c-axis side is appeared a hexagonal shape and the sharpness is high. Also, as a parameter of laser output power and scanning speed, it is possible to control the size of the hexagonal shape.

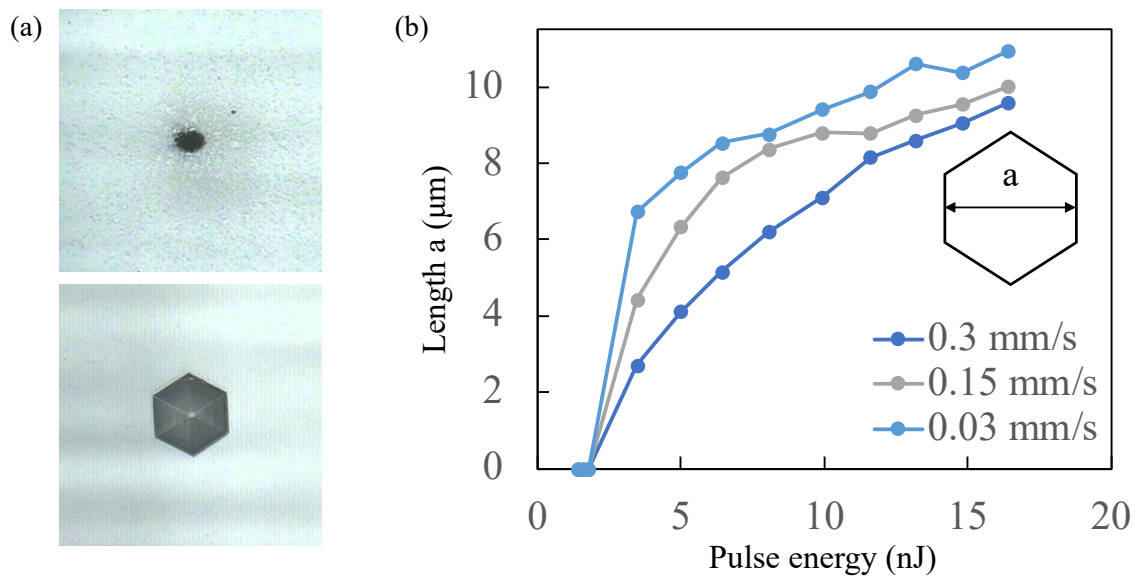


Figure 1: (a) Selective laser assisted chemical etching of aluminum nitride before and after. (b) The relationship between the geometrical transverse length and pulse energy.

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References: