

## Supporting Information

Fig. 1 shows the morphology image of the  $\text{Ni}_3(\text{BO}_3)_2$  nanowhiskers treated at 1100 °C for 120 min. It can be clearly seen that the surfaces of the nanowhiskers began to be rough.

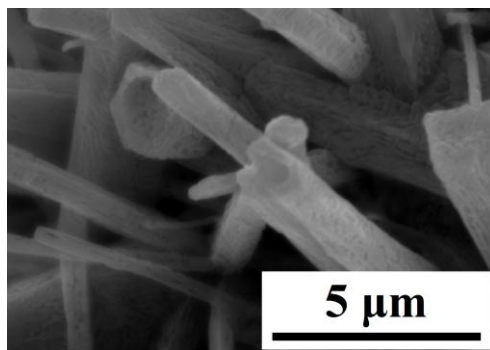


Fig. 1. Image of the  $\text{Ni}_3(\text{BO}_3)_2$  nanowhiskers treated at 1100 °C for 120 min.

Fig. 2(a) and (b) show the wettability of liquid  $\text{B}_2\text{O}_3$  on the surface of pure Ni and the oxidized surface of Ni bulk. The contrast experiment was carried out in a vacuum furnace at 950 °C in order to eliminate the influence of  $\text{O}_2$  atmosphere. It was seen that the pure Ni cannot be wetted by liquid  $\text{B}_2\text{O}_3$ . After cooling, the  $\text{B}_2\text{O}_3$  presented a ball morphology. However, the liquid  $\text{B}_2\text{O}_3$  had a good wettability to the oxidized surface. Thus, in order to promote the growth of  $\text{Ni}_3(\text{BO}_3)_2$  nanowhiskers on Ni bulks and obtain a good bonding joint, the Ni bulks used in the bonding experiments were pre-oxidized.

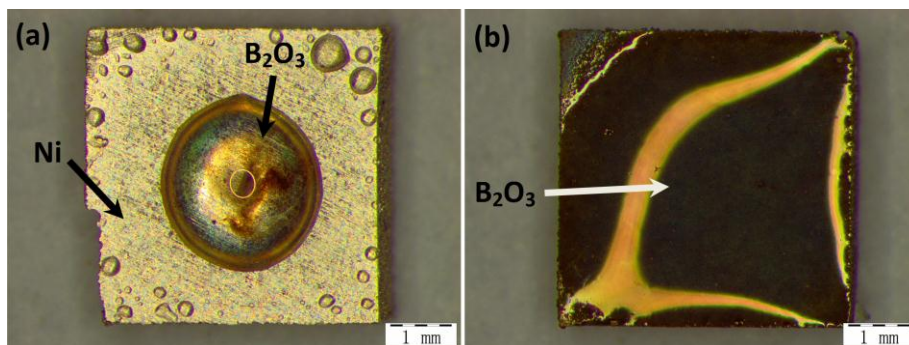


Fig. 2. Optical images of the wettability of liquid  $\text{B}_2\text{O}_3$  on the surface of pure Ni and the oxidized surface of Ni bulk.