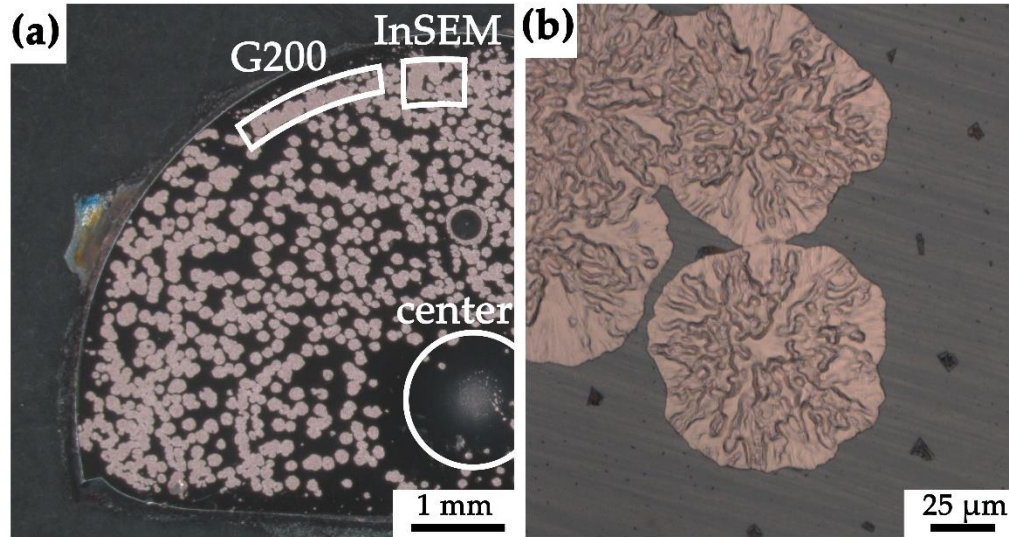


Supplementary:



S1: Macroscopic light optical microscopic images of the surface of a high-pressure deformed W/Cu nc composite disc. The specimen was heat-treated at 300 °C within a vacuum furnace for 1h and subsequently tested at several temperatures up to 600 °C by nanoindentation. In (a), the regions within the white rectangles represent the tested areas during high-temperature nanoindentation tests. Here, an accumulation of Cu pools on the surface, near and overgrowing the indentation sites, indicating a deformation-induced formation of them, is visible. In the center region, the applied deformation was not sufficient to evoke Cu pool formation. In (b), Cu pools next to and overgrowing indents are displayed.