

Detailed synthetic procedures:

Mo flakes (99.9 wt% purity) and Ti flakes (99 wt% purity), in which the impurities are Mo and Ti oxides, were purchased from the Shenyang Chemical Reagent Company. For a comparative experiment, also anatase TiO<sub>2</sub> powder (99.99 wt% purity) with an average size of 1 μm was purchased from the Shenyang Chemical Reagent Company. A Mo<sub>95</sub>Ti<sub>5</sub> alloy button was prepared in argon atmosphere by arc melting Mo and Ti flakes at least three times to ensure homogeneity. On the basis of the evaporation pressures, the atomic composition of the button was chosen as 95 at% Mo and 5 at% Ti. In the arc-discharge process, the Mo<sub>95</sub>Ti<sub>5</sub> alloy ingot was used as the anode, while the cathode was a tungsten needle. When the base vacuum of the arc-discharge chamber reached 5.0×10<sup>-3</sup> Pa, Ar was introduced into the chamber with a pressure of 1.6×10<sup>4</sup> Pa. Then, the arc was started and the discharge current was maintained at 100 A for 4 h. After passivation with air for 24 h, the product was collected in powder form.