

Supplementary Movie Legends

Supplementary Movie 1 In situ synchrotron X-ray imaging of laser welding conducted at the welding speed of 0.33 m/s with the power of 102 W.

Supplementary Movie 2 In situ synchrotron X-ray imaging of laser welding conducted at the welding speed of 0.67 m/s with the power of 188 W.

Supplementary Movie 3 In situ synchrotron X-ray imaging of laser welding conducted at the welding speed of 1.00 m/s with the power of 249 W.

Supplementary Movie 4 In situ synchrotron X-ray imaging of laser welding conducted at the welding speed of 1.25 m/s with the power of 323 W.

Supplementary Movie 5 In situ synchrotron X-ray imaging of laser welding conducted at the welding speed of 1.42 m/s with the power of 348 W.