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New Frontiers of Laser Welding Technology

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Message from the Guest Editor

Dear Colleagues,

Laser welding is a precision welding process that enables high process speed and low distortion due to low heat input into the base materials. It has been applied to various industries (e.g., automotive, electronics, etc.). Thin sheets with steel were the main application of laser welding in early stages. With the advances of power sources and optic technologies, new laser welding applications have been continuously introduced. Multi-kW fiber and disk lasers have been successfully applied to the welding of thickness plate and nonferrous alloys due to its deep penetration and high absorptivity. More recently, use of hard-to-weld material combinations has been continuously increasing in the industrial applications, and innovative laser welding technologies are emerging to meet the material requirements. For instance, laser modulation technologies are one of the hottest topics in the laser industry and academy to replace ultrasonic welding in the manufacturing of secondary battery cells.

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Message from the Editor-in-Chief

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