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Freeform Optics

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Message from the Guest Editors

Dear Colleagues,

Freeform optics is an emerging technology that brings an evolutionary development for both imaging and non-imaging optics.

New fabrication techniques can fabricate optical surfaces with no axis of rotational symmetry, which open an expansive new space for optical systems. Particularly enabled systems include illumination systems, head-worn displays, mid- and long-wave pervasive surveillance ultraviolet lithography, solar systems, extreme concentrators. space optics, mobile displays. manufacturing, remote sensing, and medical and biosensing technologies.

However, the technology requires expertise in bringing together cross-disciplinary fields of design, simulation, fabrication, testing, and assembly into one process. Concurrent freeform optics technologies are still facing many issues.

This feature issue will highlight significant contributions in both academia and industry with regards to the evolution of freeform optical systems in design, fabrication, metrology, and novel applications, as well as artificial intelligence and machine learning techniques.

