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Loading path dependent distortional hardening of Mg alloys: Experimental investigation and constitutive modeling

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- Loading path dependent distortional evolution of yield surfaces are probed directly by experiments for extruded AZ31 Mg alloy.
- Experimental comparison between the yield surface and equivalent plastic work contour is performed.
- The loading path effect on the evolution of anisotropy is discussed based on microstructure.
- A thermodynamically consistent directional distortional hardening model is employed to capture the anisotropy of extruded AZ31 Mg alloy.

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