

## Metallurgy of Lightweighting

David J. Fisher

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*Keyword:* Aluminum, Iron, Ductile Iron Castings, Magnesium Alloys, Nano-Composites, Steel, Titanium, Joining Dissimilar Materials, Batteries, Electric Vehicles, Body Torsioning, Castability, Drawability, Elasto-Viscoplastic Model, Electroplasticity, Embrittlement, Eutrophication, Extrudability, Front Crash Structure, Hall-Heroult Electrolysis, Hall-Petch Effect, Hot Extrusion, Hydroforming, Liftgate-Assembly, Lomer-Cottrell Lock, Machinability, Metamodel, Microballoon, Monocoque, Nano-Scale Spinodal, Nugget Debonding, Peening, Portevin-LeChatelier, Powerplant, Powertrain, Recrystallization Texture, Recyclability, Rheocasting, Rivetability, Self-Piercing Riveting, Solutionizing, Stiffness, Strain Hardening, Superplastic Forming, Taylor Polycrystal, Thixomolding, Weldability, Zener Effect, Zener Pinning

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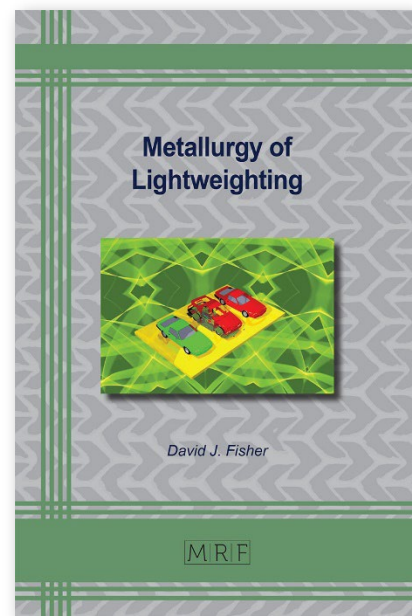
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Summary:

The existential threat of global warming has triggered the need to reduce the energy consumption of vehicles. This can be achieved by reducing the weight of vehicles; a process known as lightweighting. The book reviews recent progress in this multifaceted discipline and discusses possible future developments. It references 214 original resources with their direct web links for in-depth reading.



## Full Color Print Book Information

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