
# Surface-modified steel sheets and corrugated panels in three-point bending

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**Highlights**

- Nano-structured material is made by surface mechanical attrition treatment (SMAT)
- SMAT-treated stainless steel sheets are explored for out-of-plane bending
- The SMAT method is most efficient at the locations of high stress concentrations
- The bending strength of steel sheets is increased by SMAT by a maximum factor of 2
- The combination of SMAT and corrugation is a good choice for lightweight structures