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Modeling of competition between shear yielding and crazing in amorphous polymers' scratch

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Highlights

- A crazing initiation criterion was proposed to constitutively considering competition between shear and craze;
- Scratch damage mechanisms of ductile PC and brittle PMMA were investigated;
- Shear yielding dominates the scratch process of PC;
- Coexistence and competition between shear and craze are main mechanisms for PMMA.

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