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Grain-boundary modelling of hydrogen assisted intergranular stress corrosion cracking

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Highlights

- A hybrid BEM-FEM model for hydrogen assisted polycrystalline microcracking
- The polycrystalline problem is formulated in terms of intergranular variables only
- Hydrogen diffusion is modeled by the Ficks second law using finite elements
- Hydrogen assisted intergranular microcracking is modeled with cohesive laws
- The method allows a reduction of DoFs, appealing for multiscale analysis

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