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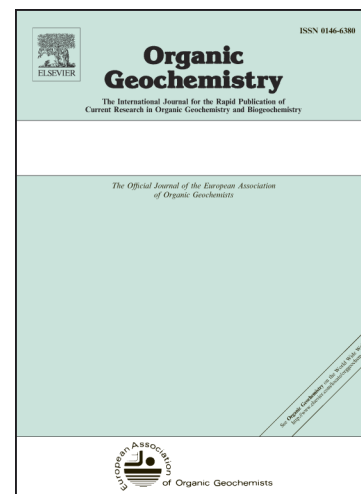
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Organic petrology and micro-spectroscopy of *Tasmanites* microfossils: applications to kerogen transformations in the early oil window

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Highlights

Tasmanites from thermal gradients were analyzed by micro-spectroscopy and petrography

Tasmanites aliphatic chains are shorter and more branched at higher thermal maturity

Oxygenated functions decrease with thermal maturity

Tasmanites converts to petroleum by the mid- to peak-oil window

A schematic mechanism for conversion of *Tasmanites* to petroleum is proposed

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