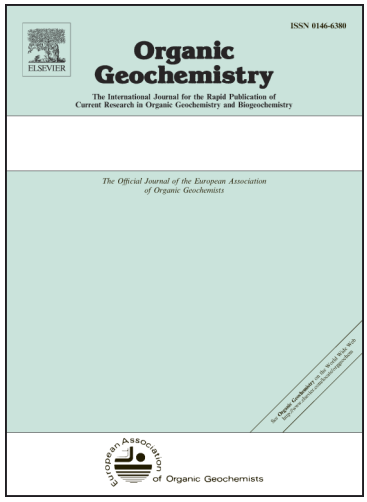


# Experimental investigations about the effect of pressure on gas generation from coal

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# Experimental investigations about the effect of pressure on gas generation from coal

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## Highlights

1. Pressure does not linearly impact hydrocarbon generation.
2. Primary generation mechanisms are unaffected by pressure.
3. secondary generation mechanisms are effected by pressure.
4. Retardation of secondary generation mechanisms is highest at 50 MPa.
5. Results have strong implications for cracking of HC in overpressured zones.

**Abstract:**

Closed-system pyrolysis experiments were conducted on a coal sample with a maturity of 0.57 %$R_o$ using gold tubes pressured to 10 MPa, 25 MPa, 50 MPa, 75 MPa and 100 MPa to investigate the influence of increasing pressure on gas generation. The variation of gaseous components generated by coal, the H/C atomic ratio and the vitrinite reflectance of pyrolysis residues with pressure and temperature indicate that pressure does not linearly impact gas generation from coal. Pressure has no effect on primary gas generation, but it does affect secondary gases generation.