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Experimental study of the mechanical properties of intact and tectonic coal via compression of a single particle

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Abstract: Mechanical properties of coal are key factors that influence coal mining and methane extraction. Considering the difficulties in obtaining the mechanical properties of the tectonic coal and some intact coal, uniaxial compression tests were conducted on both types of coal particles in the size range of 0.2–4.0 mm. The force-displacement curves, effective elastic moduli and tensile strengths of the intact and tectonic coal particles were obtained. The power functions were used

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