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Structure and Thermal Properties of Porous Geological Materials

SIMON KIRK, DAVID WILLIAMSON, Fracture and Shock Physics, SMF Group, Cavendish Laboratory, JJ Thomson Ave., Cambridge, CB3 0HE, United Kingdom — Understanding the behaviour of porous geological materials is important for developing models of the explosive loading of rock in mining applications. To this end it is essential to first characterise its complex internal structure. Knowing the structure shows how the properties of the component materials relate to the overall properties of rock. The structure and mineralogy of Gosford sandstone was investigated and this information was used to predict its thermal properties. The thermal properties of the material were measured experimentally and compared against these predictions.

Simon Kirk
Fracture and Shock Physics, SMF Group, Cavendish Laboratory,
JJ Thomson Ave., Cambridge, CB3 0HE, United Kingdom

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