





Special Issue Reprint

# Advanced Coal, Petroleum and Nature Gas Exploration Technology

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Energy is an important material basis that can promote the development of human society. Despite the increasing use of renewable energy, the overall energy supply is dominated by fossil fuels. For a long period of time, the main consumption proportion of fossil energy will not change. With the perspective of fossil fuels such as coal, oil, natural gas, shale oil, shale gas, and combustible ice, energy exploration, reservoir reconstruction, and intelligent applications in energy exploitation and energy occurrence geology are currently explored from the perspectives of exploration and exploitation technology. This reprint summarizes the intelligent unmanned mining and its development trends and conducts various research studies, including the stratigraphic correlation of sandy conglomerate in the Yellow River Delta Sag of the Bohai Bay basin, the growth and distribution of coal-measured hydrocarbon source rocks in a mixed platform, the physical and mechanical properties of sandstone, mudstone and granite in the geological environment of deep energy reservoirs, the formation mechanism of energy reservoirs and gas reservoirs, the two-phase flow experiment and numerical simulation in energy mining, the evolution law of cracks in the surrounding rock and the reinforcement principle of gradient support, and the comparison of particle pickup by axial flow and swirling flow in horizontal pneumatic conveying.



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