# Trace Element Chemistry of Fly Ashes from Co-combusted Petroleum Coke and Coal

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ABSTRACT

Because of economics, petroleum coke sometimes replaces or supplements coal as a fuel in power plant combustors. Fly ashes were recovered from the combustion of petroleum coke with moderate- to high-sulfur Illinois Basin bituminous coal in a western Kentucky power plant. The fly ashes primarily consist of glass, quartz, mullite and spinels. When compared with ordinary fly ashes from Illinois Basin coals, the petroleum coke-coal fly ashes are relatively enriched in nickel, vanadium, and other metals. Associations between trace elements and compounds within the ashes were identified through the use of distilled, deionized water batch leaching, magnetic separations, and other laboratory techniques.

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