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Synthiol process converts coal into clean fuel oil (Hydrodesulfurization for converting coals into nonpolluting fuel oil with very low S and ash contents), 6991

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Coal technology: key to clean energy. Annual report, 1973-74 (Production of synthetic fuels from coal), 5567 (NP-20078)

COED coal-to-crude process moves into pilot-plant stage (Process development unit yielded following products (wt % of dry coal): char 54.3, oil 25.6, gas 15.0, water 7.0 with the gas consisting of (vol. %) CO 22.1, hydrogen 51.0, methane 20.9, and ethane 6.0), 6842

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Removal of organic sulfur compounds from gas mixtures for synthesis. XII. Removal of ethyl mercaptan and ethyl sulfide from hydrogen, natural gas, and cracking gas (Ethyl mercaptan easily removable by Fe, Ni, Cu, Mn, Cr, Al, and Mg catalysts; diethyl sulfide removable by Cu and Ni catalysts), 686

Sulfur removal from carbon monoxide--hydrogen mixtures (Removal of S-containing organic compounds in 2-stage process by conversion to H₂S by oxidized and sulfurized Ni catalyst on kieselguhr and subsequent oxidation of H₂S), 879

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Extraction of hydrogen from coke-oven gas for use in the manufacture of synthetic gasoline (Messer process; 98-99% H₂), 7085

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Annual review of fuels for 1972. Research on gasification of coal and hydrocarbon (Review with 90 references), 5393

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- Catalysts for water-gas conversion. III. Changes of catalytic activity by adding alumina, magnesia, or silica (Effects of Al₂O₃, MgO, or SiO₂ added to Fe catalysts for reaction CO + H₂O yields CO₂ + 2H), 4089
- Chemical by-products from coal (Production of alkenes, aromatics, H, ammonia, S tar acids; conceptual all-chemical refinery), 7380 (PB-180878)
- Coal gasification (Production of CO and H by reaction of carbonaceous fuel with steam and O; equipment), 4125
- Coal gasification (Reaction of aqueous slurry of coal or coke with O above 1600°F and 100 psig to produce CO and H), 5182
- Coal investigations using laser irradiation (Effects of coal rank on nature of gaseous products yielded), 7160 (BM-RI-7326)
- COED coal-to-crude process moves into pilot-plant stage (Process development unit yielded following products (wt % of dry coal): char 54.3, oil 23.6, gas 15.0, water 7.0 with the gas consisting of (vol. %) CO 22.1, hydrogen 51.0, methane 20.9, and ethane 6.0), 6842
- Combustible gases from powdered fuels (Suspension of powdered coal and O or O-enriched air injected axially at apex of conical refractory reaction chamber; steam or CO₂ injected through whirling annular nozzle), 4127
- Continuous production of combustible gases (Combustible gases (fuel gas, synthesis gas, and H) produced by reformation or gasification of carbonaceous material), 4868
- Current trends in the American coal tar industry (Prospects for production of chemicals by coal hydrogenation and hydrogen production from coke-oven gas), 153
- Direct production of hydrogen from coal-steam systems (Reaction carried out in presence of alkali to initiate coal-steam reaction with Fischer-Tropsch catalyst), 6943
- Evaluation of the production of hydrogen by gasification of coal using nuclear heat (Production of H of 99% purity; heat transferred from nuclear reactor by stream of 435-psig He heated to 2500°F maximum; no in-reactor processing), 4885
- Evolution of gases from subbituminous coal (Coal heated at 2.8°/min from 150 to ca. 1000°; gases studied were O, N, CO, C dioxide, H, methane, ethane, propane, and ethylene; preheating to 600° would produce useful gas and some tar products and leave char that is useful for reduction), 7143
- For meeting energy requirements. Hydrogen energy carrier. Volume 1: summary (Production, technology, transportation, and implementation of H into energy systems; legal aspects and economics), 5507 (N74-11727/6)
- Gas from coal (Mixture of water and O piped into top of broken layer of coal to ignite it and produce mainly methane, CO, H, and C dioxide), 5564
- Gaseous fuel (Reactor to produce CO and H suitable for hydrocarbon synthesis), 3933
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- High-temperature reactors for coal gasification (Use of heat from nuclear reactors for gasification of coal to yield H, CO, and CH₄; no references), 5269
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- Hydrogen and other synthetic fuels. Summary of the work of the synthetic fuels panel (Review; nonfossil fuels; especially H, including production, storage, transmission, and end uses), 49 (PB-224 462/0)
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