Additron Technologies represents the new future for cleaner and low costs liquid fuels production like ethanol diesel, gasoline, jet fuel and other useful chemical products

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Press Release Summary:Currently, ethanol is being blended with conventional gasoline as an oxygenate (replacing the polluting MBTE) and is used worldwide, however, conventional ethanol and diesel fuel blends are typically not stable, particularly under extreme temperatures and pressures and therefore not available in the market.

Additron Technologies is working on a new breakthrough technology, which allows the blending of diesel with ethanol.

Press Release Body: SHANGHAI, R.O.C., February 19, 2008 --

Additron Technologies Inc. has a leading edge in the research and development of coal to liquid fuels to potentially provide a cleaner and

low costs alternative source of liquid fuels and power generation well into the foreseeable future.

We invite you to learn more about our company and our cutting edge **NANO ENHANCED™ ICL technology.**

Coal Liquefaction

Coal liquefaction is a process that converts COAL from a solid state into liquid fuels, usually to provide substitutes for petroleum products.

Coal liquefaction processes were first developed in the early part of the 20th century but later application was hindered by the relatively low price and wide availability of crude oil and natural gas.

Large scale applications have existed in only a few countries, eg, Germany during WWII and South Africa since the 1960s.

The oil crises of the 1970s and the threat of depletion of conventional oil supplies sparked a renewed interest in the production of oil substitutes from coal during the 1980s.

Coal can be liquefied by direct and indirect process routes.

Direct Coal Liquefaction (DCL)

Direct coal liquefaction was developed as a commercial process in Germany based on research pioneered by Friedrich Bergius.

Seven direct liquefaction plants were in operation in Germany just before WWII. Five additional plants were constructed during the war and produced more than 3 million ton of oil per annum.

These plants produced about 90% of the available aviation fuel for the German war effort.

Most of the direct processes developed in the 1980s were modifications or extensions of Bergius's original concept.

The coal is ground so that it can be mixed into a coal derived recycle solvent to form a coal-oil slurry feed.

The slurry containing 30-50% coal is then heated to about 450°C in a hydrogen atmosphere between 13,900-20,900 kPa pressures for about one hour.

A variety of catalysts are used to improve the rates of conversion to liquid products.

One ton of coal yields about one-half ton of liquids.

Processes have been developed to use coals from low rank lignite's to highly volatile bituminous coals.

Higher-rank coals are less reactive and anthracites are essentially non-reactive.

The liquids produced have molecular structures similar to those found in aromatic compounds and need further upgrading to produce specification fuels such as gasoline and fuel oil.

Indirect Coal Liquefaction (ICL)

Indirect liquefaction processes were developed in Germany at the same time as direct processes.

In the early 1920s, **Franz Fischer** and **Hans Tropsch** patented a process to produce a mixture of alcohols, aldehydes, fatty acids and hydrocarbons known as synthol, from a synthesis gas of hydrogen and carbon monoxide.

The Fischer-Tropsch (F-T) process forms the basis for indirect liquefaction of coal.

The process is indirect since the coal structure is completely broken down into synthesis gas by gasification with steam and oxygen.

Then the synthesis gas is reacted over an appropriate **F-T catalyst** to form predominantly paraffinic liquid hydrocarbons having wide molecular weight

This method was used to produce motor fuel during WWII and South Africa has used it to produce motor fuels and petrochemical feedstock's since the 1960s.

The indirect route yields a large number of byproducts and overall has a lower thermal efficiency.

Nano Enhanced™ ICL

Additron Technologies' model is to use waste coal or non-marketable low calorie sub bituminous coal with high moisture content, whereas competitors require high calorie coal to get a large yield.

Using sub-bituminous coal as the feed-stock, we will not require any additional water as there is enough water within the sub bituminous coal.

Competitor's gasification systems cannot use sub bituminous coal, as they need commercial compliance coal.

This is one of the biggest advantages in using our system. Our system is best suited for the use of sub bituminous coal.

Thus, our feedstock cost is between US$5 -$10 dollars per ton and our competitors must pay US$30 -$40 dollars translating into millions of dollars in savings every year.

The new cutting edge technology, **NANO ENHANCED™ ICL processing** combines **Indirect Coal Liquefaction** with the latest nanotechnologies and high temperatures.

Through controlled membranes we create a selective separation of the molecules.

By then changing the structure of these molecules and further processing, the toxic waste products like Co2 are completely eliminated.

Normal coal-derived fuels are ultra-clean: low on sulphur, low in particulates, with low levels of oxides of nitrogen.

With **NANO ENHANCED™ ICL processing,** tests have shown a greater and cleaner burn rate of the liquid fuels like diesel and jet-fuel which contributes to an even cleaner, (approx. 80% less emissions than traditional fuels), end product.

By using the revolutionary **NANO ENHANCED™ ICL** process the production cost of Synthetic oil is significantly lower than that of traditional ICL / DCL facilities.

Having no extra costs for the capture and storage of CO2 and the lower costs of the low calorie sub bituminous coal, **Additron Technologies** is able to produce synthetic oil within a price range of US$15 - $25 dollars per barrel which is much less than conventional methods.

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