CVT VALORISATION SUD

Water & Environment
Porous electrode

CONTACT

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Techonology's description

The technology is about **an innovative catalytic material**, used as porous electrode in a electrochemical depollution process with percolation. With this kind of process, electrodes are made of graphite felt which all the fibers are covered by a thin metallic layer (few nm).
This setting allows to adapt the process to specific processing depending on the chosen metal. Copper with nitrates or Nickel with bio recalcitrant molecules.
Currently, electrochemical treatment process are based on metallic thin electrodes or on porous electrodes (made of graphite).
Nitrates Treatment (with copper electrodes): treatment of high concentration rate of nitrate into ammoniac (>1g/L). Created ammoniac can be removed by a bacterial after treatment (activated sludge).
Bio-recalcitrant molecules (pesticides, drugs, dyes) degradation (with nickel electrodes): oxidation of the metals and total decomposition with a classic biological treatment.

Advantages

- The specific surface of the electrode can reach values of the order of 50 m^2/g
- Electric conductivity is 100 times higher than the graphite conductivity
- Optimum porosity to reduce the load losses in percolation using

Intellectual property

Patent

Development level

Technology validated in lab

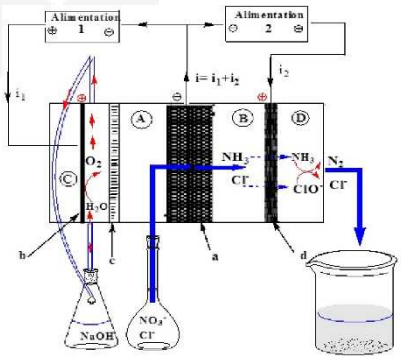
1 2 3 4 5 6 7 8 9

Applications

- Nitrates Treatment

Technology transfer

- License



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