Chemistry

TECHNOLOGY OFFER

ELECTRO-BIOREMEDIATION

Microbial electrochemical technologies are used for the bioremediation of contaminated waters. Electroactive bacteria capable to use an electrode as electron donor or electron acceptor allow the removal of ammonium, arsenic and nitrate. Bio electrochemical reactors are engineered and operated for the selective bioremediation of the target pollutant at low energy costs and without the need of chemicals addition (common method for dealing with these contaminants).

TECHNOLOGY DESCRIPTION

Specifically, the present invention consists of a device that reduces nitrates (NO_3^-) and nitrites (NO_2^-) to di-nitrogen gas (N_2) in a bioelectrochemical reactor where the cathode potential is fixed by a potentiostat. This mode automatically adapts the potential of the cell to the characteristics of the water. The environmental problem it solves is the excess of nitrates in drinking water, preventing respiratory infectious diseases and the development of goiter in children.

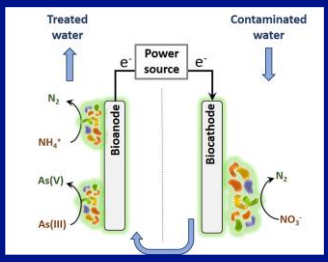
OBJECTIVE MARKET

The market to which this device is aimed is the environmental, specifically water treatment for drinking water. The goal is License the Technology or Collaborate with external company for further development

COMPETITIVE ADVANTAGES

- Usage of renewable and low-cost catalysts (microorganisms)
- Lower energy consumption

Universitat de Girona



TIME-TO-MARKET
TRL6- 10 Years

IP PROTECTION
EP 1238471.6 – PCT/EP2013/074711).

OFERTA DE NEGOCI
License Technology or Collaborate with external company

RESEARCH GROUP
The Laboratory of Chemical and Environmental Engineering (LEQUIA)

CONTACT
Unitat de Valorització
Oficina d'Investigació i Transferència Tecnològica (OITT) - UdG
valoritzacio@udg.edu
+34 972 41 89 65