Advantages of photolytic Oxdn
1. CO_2 is final product
2. does not produce solid waste problem.
3. most organics.
4. Cost competitive
특 강 II.

Applicability combined w/
a) air striping
b) steam stripping
c) biol. treatment (aerobic, anaerobic,)

Laser-Induced Photochemical Treatment of Waste Water

Michigan Automotive parts Manufacturing Facility 김 재 현 박사

Purdue 학사 - EPA - 동 덕 여 자 대 학 교 전공 환경공학과

Groundwater contamination from hazardous waste sites, leaking underground storage tanks, and poorly operated industrial facilities is a problem across the country as most of the nation depends on underground aquifers to supply their drinking water. When these aquifers become contaminated, supplying alternate sources of water can become problematic and costly.

Alternative treatment technologies are gaining acceptance in the remediation of groundwater. Oxidants such as ozone, hydrogen peroxide, and ultraviolet radiation are being researched to determine their effectiveness in removing organic contaminants from water. These treatment technologies surpass other processes such as air stripping and granular activated carbon due to the benefit of completely mineralizing the contaminants as opposed to simply transferring them to another phase. There are two varieties of photochemical treatment of water in the research and development stages today : Photocatalytic degradation and Photooxidative destruction. These techniques vary in terms of whether the reaction proceeds with an illuminated oxide semiconductor as a catalyst, or if an oxidizer is employed in the reaction process.

Rxn time(hr)
Benz 96.
Benzidine 288
Dichloroethene 624

Limitation of photocatalytic Oxdn.
1. Product is reaction inhibitor
2. depend on pH
3. batch type

Environment and Engineering Inc. 1991.