Accepted Manuscript

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PII: S0304-3894(18)30447-3
DOI: https://doi.org/10.1016/j.jhazmat.2018.06.007
Reference: HAZMAT 19444

To appear in: *Journal of Hazardous Materials*

Received date: 14-12-2017
Revised date: 24-5-2018
Accepted date: 2-6-2018

Please cite this article as: Assadi AA, Loganathan S, Tri PN, Gharib-Abou Ghaida S, Bouzaza A, Tuan AN, Wolbert D, Pilot scale degradation of mono and multi volatile organic compounds by surface discharge plasma/TiO_2 reactor: investigation of competition and synergism, *Journal of Hazardous Materials* (2018), https://doi.org/10.1016/j.jhazmat.2018.06.007

Pilot scale degradation of mono and multi volatile organic compounds by surface discharge plasma/TiO_2 reactor: investigation of competition and synergism

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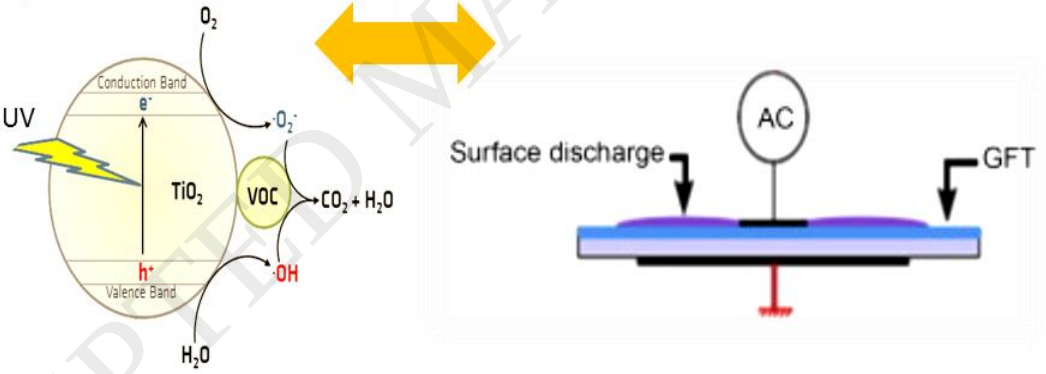
Graphical abstract



A nonthermal plasma surface discharge (NPSD) coupled with photocatalysis

Highlights

- Removal of pollutant in air mixture by photocatalysis and plasma is investigated
- Synergetic effect of combined system is explored.
- The by-products of each binary mixture were identified and evaluated.
- Monitoring of mineralization and ozone has been done at pilot scale.