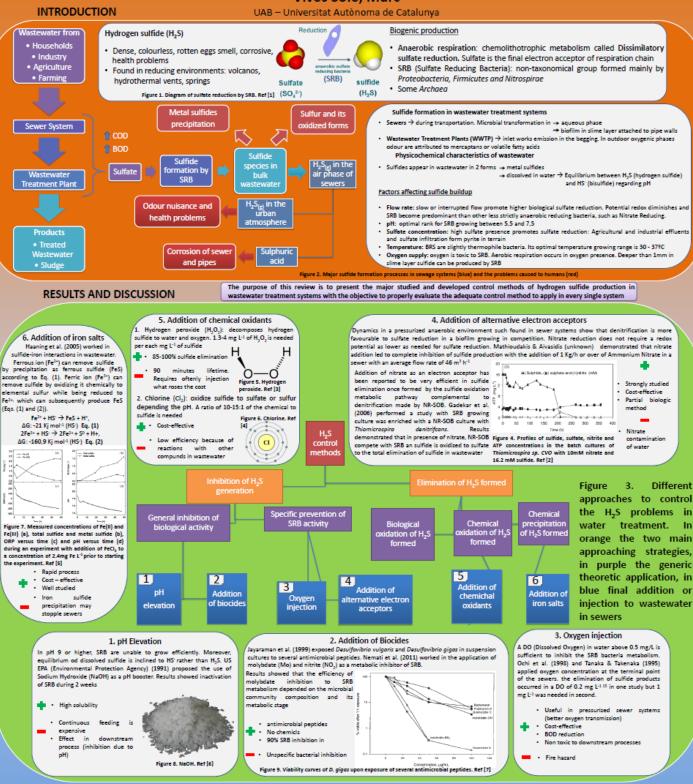
Hydrogen sulfide control in wastewater treatment:

A review

UMB

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STATE OF THE ART

Figure 10. Schematic of a MFC in a sewer system converting sulfide to sulfur and producing electricity. Ref [8]

Microbial Fuel Cells (MFCs)

MFCs are devices capable of directly transforming chemical to electrical energy by electrochemical reactions involving biochemical pathways. Rabaey et al. (2005) tested a tubular type MFC with the cathode opened to air. Using sulfide transformation to sulfur as the fuel. Results demonstrated up to 96% of sulfide elimination and up to 101 mW L⁻¹ electricity generation. Bacteriophages

Hallgerd et al. (2009) evaluated the lytic efficiency of a bacteriophage in Desulfovibrio aespoensis. As seen in figure 7, Poroviridoe morphology group phages infected 4 over 10 Desulfovibrio aespoensis samples. Phages demonstrated no infection to other 10 Desulfovibrio isolates.



CONCLUSIONS

- Despite widely studied, no final solution has been proved
- Every control method has advantages and drawbacks. Detailed evaluation must be done before application in every single system
- Biological methods, as seen in state of the art, need further research in future. They are cost-effective and environmental friendly

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