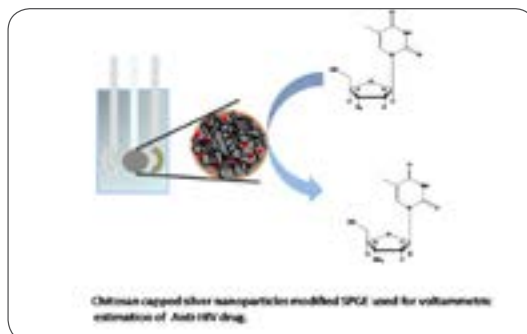


4<sup>th</sup> International Conference on **Electrochemistry**

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**Ch@AgNPs modified SPGE: Voltammetric estimation of anti-HIV drug****Preeti Tiwari, Ashish Kumar and Rajiv Prakash**  
Banaras Hindu University, India

Azidothymidine (AZT) is an anti-HIV drug used against the treatment of HIV-1 (human immunodeficiency virus-1) infections. HIV-1 is the major cause of AIDS in humans. This drug is used for the treatment of this immunosuppressive disease since 1987 and still it is one of the drugs of choice either given alone or in combination of some other drugs. This drug has a major disadvantage that its concentration more than 10  $\mu\text{M}$  in human serum causes several side effects. So, its concentration has to be maintained in human serum at very low level. Various methods are evolved for the detection of this drug using various techniques like HPLC, HPTLC etc. Electro-chemical detection of this drug is highly advantageous as it takes less time and quick response. Various modifications are utilized for electro-chemical detection of AZT. We first time developed handheld device for the detection of this drug using modified screen printed graphite electrode (SPGE). For modification we synthesized chitosan capped silver nanoparticles (Ch@AgNPs) using one pot, facile chemical reduction method. This material is utilized for the fabrication of screen printed graphite electrode (SPGE) and modified SPGE nanostructures platform is further used for estimation of AZT using simple cyclic voltammetric techniques in phosphate buffer solution at pH 7.6. This method is the most advanced as it is helpful for the development of portable sensing probes.

**Recent Publications:**

1. Tiwari P, Kumar A and Prakash R (2015) 5:90089-90097.
2. Mohan S, Prakash R and Talanta (2010) 81:449-454.
3. Gupta S and Prakash R (2014) J. Mater. Chem. 2:6859-6866.
4. Rafati A A and Afraj A (2014) Mater. Sci. Eng. C, 39:105-112.
5. Kashish, Gupta S, Dubey S K and Prakash R (2015) Anal. Methods 7:2616-2622.

**Biography**

Preeti Tiwari has completed MSc in Chemistry and has her expertise in electro-chemical sensing, conducting polymers and nanomaterials. She is developing sensors for drugs (especially anti-cancerous and anti-HIV drugs). She is also working for the development of the handheld devices for drug detection

tiwari.preeti602@gmail.com