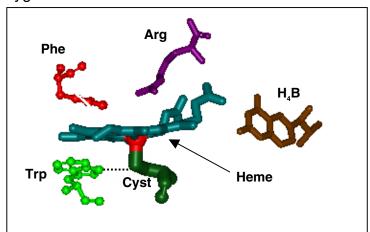
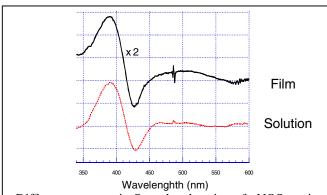
## Supporting Information:

## Structure of NOS oxygenase's active site:



Arrangement of important residues in the heme active site based on x-ray crystal structure. Note the conserved Trp engaging in H-bonding (shown in dotted line) with proximal Cys; note also  $\pi\text{--stacking}$  with heme plane and another aromatic residue, Phe, on the distal side.

## UV-Vis Characterization:



Difference spectra in Soret band region of nNOSoxy in presence and absence of substrate Arg (ca.5mM), in solution and in the ddab film on quartz slide immersed in pH=7.1 phosphate buffer.