CHEMICAL VAPOR DEPOSITION OF HIGH QUALITY FLOW-LIKE SILICON DIOXIDE USING A SILICON CONTAINING PRECURSOR AND ATOMIC OXYGEN

ABSTRACT OF THE DISCLOSURE

Methods of depositing a silicon oxide layer on a substrate are described. The methods may include the steps of providing a substrate to a deposition chamber, generating an atomic oxygen precursor outside the deposition chamber, and introducing the atomic oxygen precursor into the chamber. The methods may also include introducing a silicon precursor to the deposition chamber, where the silicon precursor and the atomic oxygen precursor are first mixed in the chamber. The silicon precursor and the atomic oxygen precursor react to form the silicon oxide layer on the substrate, and the deposited silicon oxide layer may be annealed. Systems to deposit a silicon oxide layer on a substrate are also described.