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Opinion on Computational Fluid Dynamics (CFD) Technique

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Understanding conformational and molecular dynamics flexible fitting simulations in various environments and mechanism of flow and temperature distributions and pressure drop across the intelligent molecules in explicit water is determined through spectroscopy and molecular dynamics simulations using quantum chemical calculations and consequently; regulations on the emission of intelligent molecules, biosensors, biomarkers and diagnostics to become more restrictive [1-4].

For today's chemical, mechanical and many applications of sensor devices such as intelligent molecules, biosensors, biomarkers and diagnostics are making progresses that must be minimized to acceptable levels. The design of intelligent molecules, biosensors, biomarkers and diagnostics after–treatment systems to meet emission regulations has been the subject of considerable research over several decades.

Currently, understanding conformational and molecular dynamics flexible fitting simulations in various environments and mechanism of flow and temperature distributions and pressure drop across the intelligent molecules, biosensors, biomarkers and diagnostics in explicit water is a critical and turning point in design of intelligent molecules, biosensors, biomarkers and diagnostics through spectroscopy and molecular dynamics simulations using quantum chemical calculations.

Intelligent molecules, biosensors, biomarkers and diagnostics catalysts comprise of either ceramic or metallic monolith structures featuring many parallel channels of small hydraulic diameter about 1(nm). This provides the high surfaces are required for maximum conversion efficiency.

This opinion describes a Computational Fluid Dynamics (CFD) technique for the prediction of flow and temperature distributions and pressure drop across the intelligent molecules, biosensors, biomarkers and diagnostics catalysts and also for understanding conformational and molecular dynamics flexible fitting simulations in various environments and mechanism of flow and temperature distributions and pressure drop across the intelligent molecules, biosensors, biomarkers and diagnostics in explicit water determined through spectroscopy and molecular dynamics simulations using quantum chemical calculations.

The three dimensional simulation is carried out with ANSYS Fluent: Computational Fluid Dynamics (CFD) Simulation. The results show that increasing Reynolds number (Re) of the inlet flow, the flow distributions becomes more ununiformed and the pressure drop is increased.

Also, within the operational temperature of the intelligent molecules, biosensors, biomarkers and diagnostics catalysts, the efficiency is increased.

It should be noted that among solid catalysts, heteropoly anions constitute a large class of compounds that are remarkable owing to their physiochemical properties, reversible transformation, solubility in polar solvents and activation of molecular Oxygen and Hydrogen peroxide.

These properties have made them more and more popular in many fields, such as catalysis, biology medicine, magnetism, photochemistry and materials science for understanding conformational and molecular dynamics flexible fitting simulations in various environments and mechanism of flow and temperature distributions and pressure drop across the intelligent molecules, biosensors, biomarkers and diagnostics in explicit water determined through spectroscopy and molecular dynamics simulations using quantum chemical calculations.

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