Ignition energy storage method

Does the minimum ignition energy decrease with decreasing si particle size?
We found that the measured minimum ignition energy decreaseswith decreasing Si particle size and is most sensitive to the porosity of the Si particle bed. These trends for the Xe flash ignition experiments are also confirmed by our one-dimensional unsteady simulation to model the heat transfer process.

How does graphene oxide reduce ignition energy?
The exothermic disproportionation and oxidation reactionsof graphene oxide provide additional heat and oxygen to facilitate in lowering the ignition energy and enhancing the heat release rate of Al. Such reduction in ignition energy and enhancement in the heat release rate of Al is noticeable by adding 3-20 wt% graphene oxide additives. (link)

Which plant processes can cause ignition risks due to static electricity?
About three pages are given to plant processes that can provide ignition risks due to static electricity. These include blending,stirring,mixing,crystallisation and stirred reactors. Electrostatic charge can develop in low or even medium conductivity liquids or on suspended liquid or particulates or isolated metal parts.

Why is capacitance important in determining electrostatic ignition risk?
The capacitance of a conductive object,as well as the voltage which it may attain,are highly important in determining electrostatic ignition risk. Small capacitances must attain higher voltages before the MIE of a flammable mixture is approached.

How does exposure to heat affect ignition sensitivity?
Exposure of the liquid to heat sources including sunlight, and ventilation, can influence the presence of a flammable atmosphere and its ignition sensitivity.

Which flammable vapour mixture is most easily ignited by electrostatic discharges?
The flammable vapour mixture most easily ignited by electrostatic discharges is approximately twice the lower flammable limit(LFL) vapour concentration and 10-20 C above the LFL temperature. Liquids around 0-10 C flashpoint often are most ignitable in ambient temperatures .

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