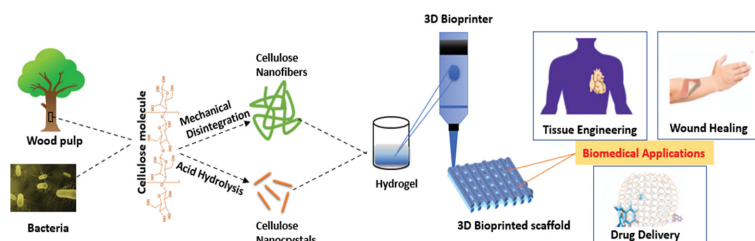


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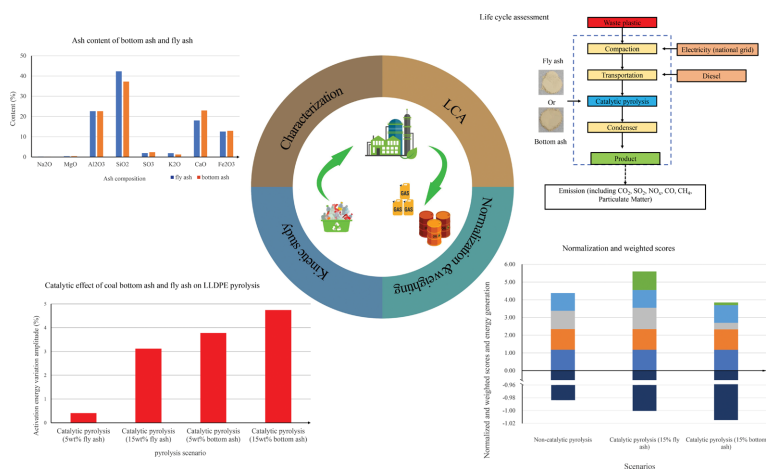
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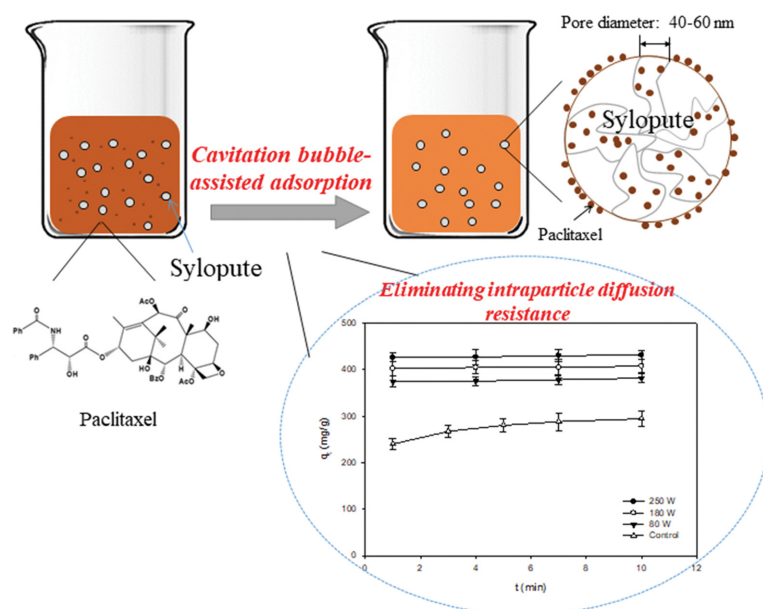
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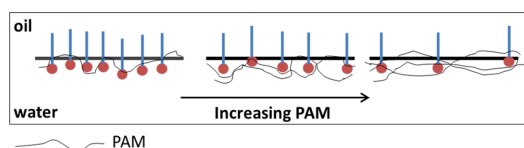
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Interaction between anionic methyl ester sulfonate (MES) and polyacrylamide (PAM) is mainly hydrophobic. The methyl ester chain of MES and the PAM backbone interact strongly at water oil interface. At a low polymer concentration, the hydrophobic and electrostatic interaction between MES and PAM established a good surfactant packing at water-oil interface hence induce the surfactant micelles formation at the PAM backbone. Increasing PAM concentration provides more hydrophobic sites at interface that attract the methyl ester chain of MES. Thus, the surfactants packing at interface gradually assemble loosely and results in a reduction of micelles formation consequently increase the water-oil interfacial tension. Less number of surfactant micelles indicates that the increase of free mobile MES at interface. MES carries negative charge at its head group, hence it increase the conductivity of the system from its mobilization at PAM backbone at interface.

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