



Efficient Utilization of Thermal Energy: Advanced Biomass Combustion Technologies

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Message from the Guest Editor

The combustion of biomass is an extremely complicated process in which the phenomena of energy transport depend on chemical phenomena, and boilers together with fuel feeding systems, burners, scrapers, heat exchangers, filters and control systems are complex and advanced devices. Despite this, biomass combustion devices are associated with old and traditional technology. This is probably because they are basically a source of traditional heating and, to a very small extent, they serve the modern cogeneration of electricity and heat. It is the combined heat and power generation that has the potential to become an impulse for the development of biomass combustion. For this to happen, biomass combustion technology must solve several key problems, including dust emission, contamination of the heat transfer surface and a relatively long time to service devices using this type of fuel. As biomass is very diverse, the development of new advanced biomass combustion systems is a task for many research and engineering teams from around the world.





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