

Bio data

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Why I select this program

I came from Bangladesh which is a developing country and the facility of research is limited where as the quality and opportunity of research in Japan is highly developed and globally recognized. Moreover, the research scope and environment in the laboratory during my master study was the latest which also motivated me to continue further study in the same university. At master study, I was carrying out research related to pyrolysis and gasification for bioenergy production which is the most important aspect for the countries that use alternative of nonrenewable energy. Japan is one of the best with such type of research too. As a part of my further study like a doctoral student, I would like to cope myself with the advance research on similar field while my present laboratory and university is mostly compatible with this research.

Research summary

The challenge for the industrialized society will be to decrease the pollutant emission. This is difficult because of energy consumption is extremely concentrated based on the fossil fuel sources. Biomass is world wide available. It is the oldest source of energy used by humans; and it is able to supply all kinds of fuels, chemicals and materials, which we currently obtain from petroleum, coal or natural gas. The conversion of biomass feedstock into valuable products is now feasible due to new technologies. My research plan is “The potential renewable energy resource development and utilization of biomass” in doctoral course of Saitama university, Japan. As a general background, we know that bioenergy provides an irreversible mitigation effect by reducing carbon dioxide from the sources, but it may emit more carbon per unit of energy than fossil fuels unless biomass fuels are produced unsustainably. Biomass can play a major role in reducing the reliance on fossil fuels by making use of thermo-chemical conversion technologies. In addition, the increased utilization of biomass-based fuels will be instrumental in safeguarding the environment, sustainable development and health improvements in rural areas. Biomass can be used as raw material for and thermo-chemical process. Though, thermo-chemical conversion technology for biomass has been started over the last three decades but more work should be needed to find out existing more natural resources and commercial exploitation. My research view will be thermo-chemical conversion of different kinds of waste biomass. However, my desired research could convert waste as a natural resource where present waste will be changed as a remarkable source of energy.