

# Optimum Type of Biomass for Global Energy Transportation

**Takako HONJO<sup>a</sup>, Hiroshi SANO<sup>b</sup>, Touru SAWAI<sup>c</sup>**

<sup>a</sup> National Institute of Advance Industrial Science and Technology (AIST), JAPAN

<sup>b</sup> Lab. Office of Global Energy System, JAPAN

<sup>c</sup> School of Biology-Oriented Science and Technology, Kinki University, JAPAN

Corresponding author: "Takako Honjo" <honjou-takako@aist.go.jp>

Although we have a huge amount of world biomass resource, the biomass resources are often restricted to local usage because the biomass is too bulky to transport efficiently. The pretreatment of the crude biomass for energy-densification sometimes results in a big energy loss. As for many bio-fuels, the authors pointed out a trade-off relationship between (A) energy density and (B) energy recovery ratio. From this point of view, the comparison was carried out among following materials: Green wood /air dried wood /chip/pellet /semi-carbonized wood /char /wood tar /bio-methanol /bio-ethanol.

**Keywords:**

biomass, wood, pellet, semi-carbonized wood, char, energy recovery, densification