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Decomposition of n-Dodecane for Hydrogen Production using Microwave in-Liquid Plasma Method ANDI AMIJOYO MOCHTAR, Ehime University and Hasanuddin University, SHINFUKU NOMURA, SHINOBU MUKASA, HIROMICHI TOYOTA, KOHJI KAWAMUKAI, Ehime University, HYDROGEN PRODUCTION TEAM — The purpose of this paper is to investigate the decomposing of dodecane in produce hydrogen using in-liquid plasma method. Microwave oven as a medium in generating plasma has modified and connected with the generator. The plasma was improved 1.3 times of hydrogen production when the electrode bubbles were created. The hydrogen ratio of the generated gas was created graphite concentrate that can decrease the decomposition of plasma. The steam reforming in plasma was induced the gas production rate increase 1.4 times. The generated hydrogen efficiency of alkaline water electrolysis was reached at 284% and the conventional of steam reforming at 41%.

Andi Amijoyo Mochtar
Ehime University and Hasanuddin University

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