

The collaboration research for the Dual Graduate School between VNU and JAIST

[Title of collaboration research]:

Development of phototriggered DNA manipulation via intelligent nucleic acids

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<http://www.jaist.ac.jp/ms/labs/fujimoto/>

[Other references]:

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While many methods for enzymatic and chemical ligation of DNA fragment via a native phosphodiester bond or non-native linkages have been demonstrated, there are only a few methods for photoinduced non-enzymatic chemical ligation. The merit of the photochemical ligation avoiding the need for additional reagent is obvious. Furthermore, their actions are controllable within space and time by the choice of proper irradiation methods. The photoligation methods can be used as a tool for DNA engineering and nanotechnology, and as photoregulated diagnostic and therapeutic agents. Therefore, the target in my research program is the development about phototriggered DNA manipulation via intelligent nucleic acids toward for the next generation DNA manipulation.