1145-46-863   **Rolando de Santiago*** (`rdesantiago@math.ucla.edu`), CA, and **Ionut Chifan** and **Wanchalerm Sucpikarnon**. *Tensor product decompositions of II$_1$ factors arising from extensions of amalgamated free product groups.*

We introduce a new family of groups Γ which satisfy the following product rigidity phenomenon: all tensor product decompositions of the II$_1$ factor $L(\Gamma)$ arise only from the canonical direct product decompositions of the underlying group Γ. Our groups are assembled from certain amalgamated free products and include many remarkable groups studied throughout mathematics such as graph product groups, Burger-Mozes groups, Higman group, various integral two-dimensional Cremona groups, etc. As a consequence, we obtain several new examples of groups that give rise to prime factors. (Received September 16, 2018)