Synopsis of Original Research Paper

## Predicting odor pleasantness for olfactory mixture based on physicochemical property

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We propose several approaches to quantify olfactory perception. First we investigated the difference in physicochemical properties between general odors and odors used for fragrance. This enables us to predict whether untested odor is suitable as a component of fragrance to some extent. Second, we established a method to predict the response of olfactory receptors by use of physicochemical property. Third we investigated the relationship between mixture perception and component variability and found that the perception for mixture being composed of the similar odors show low dependency to concentration change. These data may contribute further understanding for the perception to multicomponent odors.