

## Abstract

Awareness of the importance of understanding chemical concepts and their applications such as compound objectives and their derivatives is one of the important things in learning chemistry. To make it easy to learn chemistry and its derivatives, it is necessary to have the right strategy in conveying the concept, therefore, it is necessary to have a tool to achieve good learning. Augmented Reality-based learning can make chemistry lessons for high school students more interesting and accessible.

The HAR application is an Augmented Reality Based Hydrocarbon Chemistry Learning application that displays compounds in 3D (Three Dimensional) form and sound on each page. This application also features a quiz and interactive materials to support student learning. This app is made using Unity and 3D Objects. The marker used is an innovation from learning chemistry to find that displays different objects according to known compounds, or can be called multiple markers. The target users of the HAR Application are high school students of class XI who have a minimum Android version 7.0 (Nougat) and a minimum of 3GB RAM.

From the results of alpha testing, the application can run well and the results of beta usability testing using the USE Questionnaire method with an average score of 86.2% are in the Strongly Agree category, indicating that the HAR application is running well as it should and according to the design.

**Keywords:** Augmented Reality (AR), Unity and Android, hydrocarbon chemistry