



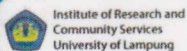
# PROGRAM BOOK

The 2<sup>nd</sup> International Conference on Applied Sciences, Mathematics and Informatics



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**Abstract.** This study focuses on the examination of a series of nitrogen-containing surfactants as the effective, efficient and environmental friendly corrosion inhibitors for application in gas and petroleum industries. The idea of this research is in line with one of the flagship programs of the University of Lampung namely the development of advanced materials. This work investigated the green corrosion inhibitors based on imidazoline-containing surfactants as corrosion inhibitors for the prevention of carbon dioxide corrosion of mild steel. Weight loss (wheel test) and Linear Polarization Resistant (LPR) methods were used to determine corrosion rate and inhibition efficacy of the surfactants on surface of mild steel. The analyses of corrosion inhibition using weight loss method revealed that the surfactants were found to inhibit the corrosion with different efficacies. In term of the inhibition efficacy, the LPR results indicate that all samples tested were able to inhibit the corrosion, the higher the concentration the higher the percent protection. Experiments at different temperatures were that increased temperatures led to lower protection.

**Keywords:** Imidazoline; surfactant; CO<sub>2</sub> corrosion; Corrosion Inhibitor

### **Production of a Calix[4]resorcinarene Derivate Compound**

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**Abstract.** Production of a calix[4]resorcinarene derivate compound i.e. tetrakis-chloromethyl-C-4-allyloxy-3-methoxyphenylcalix[4]resorcinarene has been performed using a natural material as raw material to obtain the calixarene compound with low cost production. The production was carried out in three steps i.e. (1) synthesis of 4-allyloxy-3-methoxy benzaldehyde, (2) synthesis of C-4-allyloxy-3-methoxyphenylcalix[4]resorcinarene, and (3) synthesis of tetrakis-chloromethyl-C-4-allyloxy-3-methoxyphenylcalix[4]resorcinarene. Structure elucidation of products were performed using FT-IR, <sup>1</sup>H-NMR, <sup>13</sup>C-NMR, and GC-MS. The product of a calix[4]resorcinarene derivate compound was obtained as a light brown solid in 71% yield with m.p. >250 °C.

**Keywords:** production; calixarene; calix[4]resorcinarene derivate compound

### **The Potential Of Derivatives Of Organotin (Iv) Benzoate Compounds In Medicinal Chemistry**