

[Pengaruh Suhu dan Loading Ni pada Katalis Ni/SiO₂.Al₂O₃ Terhadap Hidrodeoksigenasi Bio-Oil Hasil Ko-Pirolisis Minyak Sawit dan Polipropilena = Effect of Temperature and Loading of Ni in Ni/SiO₂.Al₂O₃ Catalyst Towards Hydrodeoxygenation of Bio-Oil from Co-Pyrolysis of Palm Oil and Polypropylene ; Analisis Faktor yang Memengaruhi Intensi Pembelian di Social Commerce dengan Perspektif Teori Socio-technical dan Self-determination = Intention to Purchase in Social Commerce: Socio-technical and Self-determination perspective; Analisis Faktor yang Memengaruhi Intensi Pembelian di Social Commerce dengan Perspektif Teori Socio-technical dan Self-determination = Intention to Purchase in Social Commerce: Socio-technical and Self-determination perspective; Analisis Faktor yang Memengaruhi Intensi Pembelian di Social Commerce dengan Perspektif Teori Socio-technical dan Self-determination = Intention to Purchase in Social Commerce: Socio-technical and Self-determination perspective, Analisis Faktor yang Memengaruhi Intensi Pembelian di Social Commerce dengan Perspektif Teori Socio-technical dan Self-determination = Intention to Purchase in Social Commerce: Socio-technical and Self-determination perspective]

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Abstrak

[Bio-oil dari ko-pirolisis minyak sawit dan polipropilena tidak dapat langsung digunakan sebagai bahan bakar untuk mesin karena mengandung senyawa oksigenat serta sifat-sifatnya yang asam, korosif dan tidak stabil. Pada penelitian ini, bio-oil akan di-upgrade melalui proses hidrodeoksigenasi (HDO) menggunakan katalis Ni/SiO₂.Al₂O₃ untuk mendorong terhadap pembentukan senyawa alkana. Proses HDO bio-oil dilakukan secara semi-batch menggunakan self gas-inducing impeller yang dapat memecah gelembung gas hidrogen sehingga meningkatkan kontak antara hidrogen, bio-oil dan katalis. Proses HDO dilakukan pada tekanan gas hidrogen konstan sebesar 15 barg, kecepatan pengaduk 400 rpm, serta holding time 1 jam setelah mencapai suhu yang ditentukan. Pada penelitian ini, pengaruh suhu serta pengaruh loading Ni dalam katalis Ni/SiO₂.Al₂O₃ dipelajari untuk mengetahui efeknya terhadap proses HDO. Katalis Ni/SiO₂.Al₂O₃ dengan loading Ni sebesar 10% digunakan untuk seluruh proses dengan variasi suhu, sedangkan suhu 200oC digunakan untuk seluruh proses dengan variasi loading Ni. Peningkatan suhu dari 100oC menjadi 150oC meningkatkan kandungan senyawa keton serta menurunkan senyawa karboksilat yang terkandung di dalam bio-oil produk HDO, yang artinya reaksi bergerak ke arah reduksi yang sesuai dengan tujuan HDO. Namun, peningkatan suhu lebih lanjut pada 200oC menyebabkan reaksi bergerak ke arah oksidasi dimana senyawa keton tidak terbentuk serta terjadinya peningkatan senyawa karboksilat. Hal ini besar kemungkinan diakibatkan rendahnya rasio H₂/CO akibat proses yang dilakukan tanpa solven. Reaksi reduksi tidak terjadi untuk proses HDO dengan loading Ni sebesar 5%, 10%, dan 15% pada katalis Ni/SiO₂.Al₂O₃, dimana hal

ini ditandai dengan peningkatan senyawa karboksilat pada bio-oil produk HDO dengan loading Ni sebesar 5% dan 10%, serta pembentukan senyawa ester pada loading Ni sebesar 15%. Namun, pada reaksi HDO dengan loading Ni sebesar 20%, menghasilkan bio-oil dengan kandungan senyawa keton, yang artinya reaksi bergerak ke arah reduksi yang sesuai dengan tujuan HDO.

.....Bio-oil from co-pyrolysis of palm oil and polypropylene cannot be used directly as engines fuel because of its oxygenate compounds and its acidic, corrosive and unstable characteristics. In this research, bio-oil was upgraded through a hydrodeoxygenation (HDO) process using Ni/SiO₂.Al₂O₃ catalyst for converting bio-oil to produce alkanes. The HDO bio-oil process was carried out in a semi-batch using a self gas-inducing impeller reactor that can break hydrogen gas bubbles so the contact between hydrogen, bio-oil and the catalyst increased. The HDO process was carried out in a constant hydrogen gas pressure of 15 barg, stirrer speed of 400 rpm, and holding time of 1 hour after reaching the specified temperature. In this research, the effect of temperature and the effect of Ni loading in the Ni/SiO₂.Al₂O₃ catalyst were studied to determine its effect on the HDO process. Ni/SiO₂.Al₂O₃ catalyst with Ni loading of 10% was used for all processes with variations in temperature, while a temperature of 200°C is used for all processes with variations of Ni loading in the Ni/SiO₂.Al₂O₃ catalyst. Increasing the temperature from 100°C to 150°C did increase ketone compounds and decrease carboxylic compounds in the bio-oil from HDO, which means that the reaction favors reduction, linear with the purpose of HDO process. However, further increase in temperature to 200°C causes the reaction to favor oxidation, where ketones were not formed while carboxylic compounds increase significantly. This is most likely occurred because of low H₂/CO ratio due to the process carried out without solvent. The reduction reaction did not occur for the HDO process with 5%, 10%, and 15% of Ni on a Ni/SiO₂.Al₂O₃ catalyst. This was indicated by an increase in carboxylic compounds in the bio-oil of HDO, where bio-oil of HDO with 5% and 10% Ni on Ni/SiO₂.Al₂O₃, while bio-oil of HDO with 15% Ni on Ni/SiO₂.Al₂O₃ contains esters. However, HDO reaction with 20% Ni on Ni/SiO₂.Al₂O₃ produces bio-oil which has ketone compounds, means that the reaction moves towards the reduction, linear with the purpose of HDO.

Social commerce (**s-commerce**) adalah aktivitas perdagangan daring yang menggunakan **social network sites** (SNS) seperti Facebook dan Instagram. Masyarakat Indonesia sendiri diketahui memiliki sikap belanja yang sangat dipengaruhi oleh SNS. Motivasi intrinsik disebutkan sebagai hal yang paling memengaruhi seseorang untuk mengambil keputusan termasuk dalam berbelanja di **s-commerce**. Agar dapat mengetahui karakteristik **s-commerce** apa saja yang memengaruhi motivasi intrinsik seseorang, digunakan perspektif teori **socio-technical**. Teori **socio-technical** digunakan karena faktor sosial dan teknis pada **s-commerce** tidak dapat dipisahkan. Model penelitian ini terdiri dari bagian 1) dukungan sosial (**informational support** dan **emotional support**); 2) penunjang teknis (**support for social interaction**, **support for recommendation**, dan **support for reputation**); 3) **self-determination theory** (**autonomy**, **competence**, **relatedness**, dan motivasi intrinsik); dan 4) faktor intensi pembelian pada **s-commerce**. Penelitian dilakukan menggunakan metode **covariance-based structural equation modelling** (CB-SEM) dengan menggunakan survei daring yang diisi oleh 561 responden valid. Hasil analisis membuktikan bahwa semua faktor dalam karakteristik teknis **s-commerce** memengaruhi **autonomy** dan **competence**; faktor **emotional support** memengaruhi **relatedness**; faktor **informational support** memengaruhi **autonomy**, **competence**, dan **relatedness**; faktor **autonomy**, **competence**, dan

relatedness memengaruhi motivasi intrinsik; dan motivasi intrinsik memengaruhi intensi pembelian pada s-commerce. Penelitian ini diharapkan dapat mengisi kekosongan penelitian mengenai motivasi dalam s-commerce. Penelitian ini juga diharapkan dapat memiliki implikasi praktikal bagi pelaku industri s-commerce untuk mengimplementasi fitur yang sesuai dan mengatur strategi bisnis yang tepat.</div><hr /><p>Social commerce (s-commerce) is an e-commerce activity that uses social network sites (SNS) such as Facebook and Instagram. In Indonesia, people are known to have a shopping behavior that is strongly influenced by SNS. Intrinsic motivation is mentioned as the thing that most influences one’s behavior, including shopping behavior in s-commerce. In order to find out what s-commerce characteristics affect one's intrinsic motivation, a socio-technical theory perspective is used; because social and technical factors in s-commerce cannot be separated. This research model consists of 1) social support (informational support and emotional support); 2) technical support (support for social interaction, support for recommendation, and support for reputation); 3) self-

determination theory (autonomy, competence, relatedness, and intrinsic motivation); and 4) purchase intention in s-commerce. The study was conducted using the covariance-based structural equation modeling (CB-SEM) method using an online survey filled by 561 valid respondents. The results of the analysis prove that all factors in the technical characteristics of s-commerce affect autonomy and competence; emotional support factors affect relatedness; informational support factors affect autonomy, competence, and relatedness; autonomy, competence, and relatedness factors affect intrinsic motivation; and intrinsic motivation affects purchase intentions in s-commerce. This research is expected to fill the research gap regarding motivation in s-commerce. This research is also expected to have practical implications for the s-commerce industry players to implement the appropriate features and set the right business strategy.</p>]