

ปัจจัยที่มีผลกระทบต่อ โครงสร้างของซีไอ ไลต์แบบเพนทาซิลลิ่งเคราะห์



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วิทยานิพนธ์นี้เป็นส่วนหนึ่งของการศึกษาตามหลักสูตรปริญญาวิศวกรรมศาสตรมหาบัณฑิต

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FACTORS AFFECTING THE STRUCTURE OF SYNTHETIC PENTASIL ZEOLITE

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พิมพ์ต้นฉบับบทคัดย่อ วิทยานิพนธ์ภายในกรอบสี่เหลี่ยมนี้เพียงแผ่นเดียว

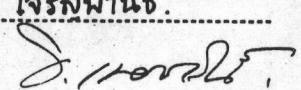


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ในการศึกษาเรื่อง ปัจจัยที่มีผลกระทบต่อโครงสร้างของซีโอไลต์แบบเพนทาซิลสังเคราะห์  
นี้ ปัจจัยที่นำมาศึกษาคือ องค์ประกอบทางเคมีของผลึก ความดันขณะเริ่มต้นในเครื่องปฏิกรณ์สัง-  
เคราะห์ผลึก ความเป็นกรด-ด่างของสารละลายผสม อัตราการเพิ่มของอุณหภูมิในขั้นตอนการสัง-  
เคราะห์ผลึก และอุณหภูมิและเวลาที่ใช้นั้นขั้นตอนการเผาผลึกที่อุณหภูมิสูง ปรากฏว่า ทุกปัจจัยมีผล  
กระทบต่อโครงสร้างของซีโอไลต์เป็นอย่างมาก ยกเว้นอุณหภูมิและเวลาที่ใช้นั้นขั้นตอนการเผาผลึก  
ที่อุณหภูมิสูง จากการทดลองพบว่าการสังเคราะห์ผลึกสารตัวเร่งปฏิกิริยาให้ได้เป็นผลึก ZSM-5 ที่  
สมบูรณ์นั้น เงื่อนไขที่เหมาะสมที่สุดคือ ที่อัตราส่วนโมลของซิลิกอนต่ออะลูมิเนียมมีค่า 140 ( จากใน  
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พิมพ์ต้นฉบับบทคัดย่อวิทยานิพนธ์ภายในกรอบสี่เหลี่ยมนี้เพียงแผ่นเดียว



**METTA CHAREONPANICH : FACTORS AFFECTING THE STRUCTURE OF SYNTHETIC PENTASIL ZEOLITE.**

**THESIS ADVISOR : DR.DHONGCHAI MEDHANAVYN, Ph.D.,**

**204 PP.**

In the study of factors affecting the structure of synthetic pentasil zeolites, the interesting factors were chemical compositions of crystals, initial pressures in crystallizer, pH of mixing solutions, temperature rates in crystal synthesis, and temperatures and times in calcination process. The results were concluded that all factors greatly affected on structure of synthetic pentasil zeolites except temperatures and times in calcination process. And the most optimum conditions in ZSM-5 synthesis were Si/Al mole ratio 140 (in the range of 20 and 200), initial pressure 3 kg/cm<sup>2</sup>(gauge), pH of mixing solutions 8-10, and heating rate 1.6 °C/min.

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