

PYROLYTIC CONVERSION OF DIVINYLSULFIDE TO THIOPHENE

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UDC 547.732

We have found that divinyl sulfide undergoes thermal dehydrocyclization at 450–560°C to give thiophene:



The reaction is realized in a flow system in a hollow quartz tube in a nitrogen atmosphere. At 560°, a divinyl sulfide feed rate of 10 ml/h and a nitrogen feed rate of 3 liters/h, the divinyl sulfide conversion was 95%, but the maximum yield of thiophene reached only 40% because of pronounced resinification. A mixture of low-boiling products of the pyrolysis of divinyl sulfide (10–15% of the weight of the condensate) is formed along with thiophene. The yield of thiophene from divinyl sulfide is not raised when hydrogen sulfide is present.

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Translated from *Khimiya Geterotsiklicheskikh Soedinenii*, No. 11, pp. 1579–1580, November, 1975. Original article submitted May 8, 1975.

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