

Selective synthesis of ethylene trithiocarbonate from ethylene carbonate

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Ethylene trithiocarbonate (ETTC) was obtained directly from the reaction of ethylene carbonate with carbon disulfide using a catalyst for the coupling reaction of ethylene oxide and CO₂ to prepare ethylene carbonate. Among the catalysts tested, lithium chloride showed the highest yield and selectivity over 95%. By this synthetic methodology, the formation of polymeric side product and the danger of explosiveness arising from the use of ethylene oxide as a raw material were greatly reduced.