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(71) Applicants: **GRT, INC.** [US/US]; P.O. Box 130906, The Woodlands, TX 77381 (US). **THE REGENTS OF THE UNIVERSITY OF CALIFORNIA** [US/US]; 1111 Franklin Street, 12th floor, Oakland, CA 94607 (US).

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(72) Inventors: **ZHOU, Xiao, Ping**; 733 Elkus Walk, Apt. #102, Goleta, CA 93117-4127 (US). **LORKOVIC, Ivan, Marc**; 22 West Islay Street, Santa Barbara, CA 93101 (US). **SHERMAN, Jeffrey, A.**; 301 B South Wimbrow Drive, Sebastian, FL 32958 (US).

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(74) Agent: **O'NEIL, Michael, A.**; Michael A. O'Neil, P.C., Suite 1030, 5949 Sherry Lane, Dallas, TX 75225 (US).

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(54) Title: INTEGRATED PROCESS FOR SYNTHESIZING ALCOHOLS, ETHERS, AND OLEFINS FROM ALKANES

(57) Abstract: Alcohols, ethers, and olefins are manufactured from alkanes by mixing an alkane and bromine in a reactor to form alkyl bromide and hydrogen bromide. The alkyl bromide only or the alkyl bromide and the hydrogen bromide are directed into contact with metal oxide to form an alcohol and/or an ether, or an olefin and metal bromide. The metal bromide is oxidized to form original metal oxide and bromine, both of which are recycled.

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