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(88)	Date of publication A3: 02.04.2003 Bulletin 2003/14	(51) Int Cl. ⁷ : C01B 39/02 , C01B 39/24, C01B 39/32, C01B 39/38,
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(30)	Priority: 09.04.2001 US 828139	(74) Representative: Nash, David Allan Haseltine Lake & Co.,
(71)	Applicant: CHEVRON U.S.A. INC. San Ramon, California 94583-4289 (US)	Imperial House, 15-19 Kingsway London WC2B 6UD (GB)

(54) Methods for making molecular sieves

(57) An in-extrudate reaction mixture to be effectively crystallized is effectively crystallized to produce zeolitic or non-zeolitic molecular sieves. The reaction mixture is heated within a slowly rotating, double-walled reactor vessel wherein a heated medium is conducted within a space formed between the double walls of the vessel. Thus, the reaction mixture is contacted by a uniformly heated wall while being gently tumbled at low speed. The tumbling action serves to uniformly distribute the heat within the reaction mixture without subjecting the mixture to such shearing that could damage shaped particles. A relatively high quantity of reaction mixture can be handled in that way to maximize the production volumes and reduce production costs.

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