Claims

1. A molding comprising a zeolitic material having framework type MWW, having a framework structure comprising Ti, Si, and O, wherein the zeolitic material further comprises Zn and an alkaline earth metal M, the molding further comprising a binder, wherein the molding exhibits an integral extinction units of the IR band at 1490 cm^{-1} of equal to or smaller than 8, determined as described in Reference Example 1, wherein the molding comprises the alkaline earth metal M, calculated as element, in an amount in the range of from 0.5 to 5.0 weight.-%, based on the total weight of the molding, wherein the alkaline earth metal M is one or more of Mg, Ca, Sr, and Ba.

2. The molding of claim 1, comprising Si, calculated as element, in an amount in the range of from 20 to 60 weight-%, based on the total weight of the molding.

3. The molding of claim 1 or 2, comprising Ti, calculated as element, in an amount in the range of from 0.1 to 5 weight-%,

4. The molding of any one of claims 1 to 3, comprising Zn, calculated as element, in an amount in the range of from 0.1 to 5 weight-%, based on the total weight of the molding.

5. The molding of any one of claims 1 to 4, wherein the zeolitic material further comprises a rare earth metal.

6. The molding of any one of claims 1 to 5, wherein the binder comprises Si and O.

7. The molding of any one of claims 1 to 6, wherein the molding exhibits a total pore volume in the range of from 0.5 to 3.0 mL/g, wherein the pore volume is determined according to DIN 66133.

8. The molding of any one of claims 1 to 7, wherein the molding comprises a concentration of acid sites in the range of from 0.05 to 1.00 mmol/g at a temperature lower than 200 °C, and/or wherein the molding comprises a concentration of acid sites in the range of from 0.001 to 0.5 mmol/g at a temperature higher than 500 °C, wherein the concentration of acid sites is determined by temperature programmed desorption of ammonia (NH_3-TPD) according to Reference Example 5.

9. A process for preparing a molding comprising a zeolitic material having framework type MWW and a binder material, the process comprising
   (i) providing a molding comprising a zeolitic material having framework type MWW, having a framework structure comprising Ti, Si, and O, wherein the zeolitic material further comprises Zn, an alkaline earth metal M, and optionally a rare earth metal, wherein the molding further comprises a binder for said zeolitic material;

wherein the zeolitic material comprises the alkaline earth metal M, calculated as element, in an amount in the range of from 0.5 to 5.0 weight.-%, based on the total weight of the molding, wherein the alkaline earth metal M is one or more of Mg, Ca, Sr, and Ba;

(ii) preparing a mixture comprising the precursor molding according to (i) and water, and subjecting the mixture to a water treatment under hydrothermal conditions, obtaining a water-treated molding, and calcining the water-treated molding in a gas atmosphere; wherein the water-treatment according to (ii) comprises a temperature of the mixture in the range of from 100 to 200 ° C; wherein the water-treatment according to (ii) is carried out under autogenous pressure; wherein the water-treatment according to (ii) is carried out for 6 to 10 h.

10. The process of claim 9, wherein (i) comprises

(i.1) providing a zeolitic material having framework type MWW and having a framework structure comprising Ti, Si, and O;

(i.2) providing an aqueous solution of a source of Zn;

(i.3) providing an aqueous solution of a source of an alkaline earth metal M;

(i.4) optionally providing an aqueous solution of a source of a rare earth metal;

(i.5) impregnating the zeolitic material provided according to (i.1) with the aqueous solution provided according to (i.2), the aqueous solution according to (i.3), and optionally the aqueous solution provided according to (i.4), obtaining an impregnated zeolitic material;

(i.6) preparing a mixture comprising the impregnated zeolitic material obtained from (i.5) and a binder precursor;

(i.7) shaping of the mixture obtained from (i.6).

11. Use of a molding according to any one of claims 1 to 8 as an adsorbent, an absorbent, a catalyst or a catalyst component.

12. A process for oxidizing an organic compound comprising bringing the organic compound in contact with a catalyst comprising a molding according to any one of claims 1 to 8.

13. The process of claim 12 for preparing propylene oxide comprising reacting propene with hydrogen peroxide in acetonitrile solution in the presence of a catalyst comprising a molding according to any one of claims 1 to8 to obtain propylene oxide.