Synthesis details:

Synthesis of Sn-Beta was performed in fluoride medium from gels of the following molar composition:

\[ \text{SiO}_2 : x \text{SnO}_2 : 0.54 \text{TEAOH} : 7.5 \text{H}_2\text{O} : 0.54 \text{HF} \]

where \( x \) was 1/120 and 1/240.

The solids were dried at 100°C and calcined at 580°C. The Sn-Beta shows a crystallinity higher than 93% compared with a commercial Beta (Zeolyst Intl.).
XRD pattern of as-made and calcined Sn-Beta, a) with 1% SnO₂; b) with 2% SnO₂.

a)

b)
\(^{119}\)Sn MAS NMR spectrum of dehydrated Sn-Beta (2\% SnO\(_2\)).