Electronic supporting information

Reactivity of Diatomics and of Ethylene on Zeolite-Supported 13-Atom Platinum Nanoclusters

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Figure S1: Numbering Scheme of ethane molecule. All isotopomers were calculated for staggered conformations (back rotor rotated by 60° with respect to front rotor). Eclipsed conformations exhibited negative frequencies for the lowest frequency (internal rotation) mode.
### Table S1: Calculated intensities for various isotopologues in different conformations for the ethane product

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<th>Isotopologue</th>
<th>Conformation</th>
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<th>Intensity</th>
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| CD$_3$–CD$_3$ | staggered | 979.97 | 0.0000 |
| CD$_3$–CD$_3$ | staggered | 1074.77 | 0.0000 |
| CD$_3$–CD$_3$ | staggered | 1074.77 | 0.0000 |
| CD$_3$–CD$_3$ | staggered | 1079.52 | 0.7536 |
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