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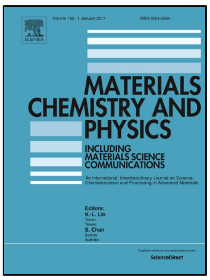

Structures, stability, magnetic moments and growth strategies of the Fe_nN (n=1-7) clusters: all-electron density functional theory calculations

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Highlights:

1. The structural stability of the Fe_4N and Fe_6N clusters is higher.

2. The chemical stability of the Fe_3N and Fe_7N clusters is higher.

3. Fe_5 clusters are easier to adsorb a Fe atom while Fe_4 clusters are easier to adsorb a N atom.

4. Fe_nN clusters prefer to adsorb a Fe atom.

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