SN IN HIGH SCHOOLS

March 4, 2017

Built for Speed

Article-Based Questions

Directions: Read the article "Built for speed" and then answer these questions:

1. **Pick out your favorite metaphor used by the author to describe a catalyst. Use it to explain the purpose of a catalyst in a chemical reaction.**

2. **Liming Dai and other scientists are engineering new materials that have a catalytic power similar to platinum. Why is there a need for new catalytic materials?**

3. **Carbon might be an alternative to platinum and other precious metals used as catalysts. Chemist Huixin He notes that carbon structures alone aren't catalytically active. What alterations are made to carbon structures so that they can serve as catalysts?**

4. **Huixin He's team is working with phytic acid as an alternative catalytic material. How are the researchers transforming phytic acid into a catalyst and what are the advantages of using it?**

5. **Explain the advantages and disadvantages of using enzymes as catalysts for industrial purposes.**

6. **Rather than finding alternatives to catalytic metals, chemist Younan Xia is researching ways to minimize platinum waste. What structures are Xia and his team developing and why are they effective catalytically?**

7. **Briefly explain why "Built for speed" is a fitting title for this article.**