

Making hydrogen from banana peel

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The powder is exposed to a flash of a xenon lamp. Xenon lamps produce bright white light that closely mimics sunlight, causing the powder molecules to reach a temperature of over 1000°C for a few milliseconds. The process generates 100 litres of hydrogen per kilogram of banana peel powder. The process also works with corncob, orange peel, coffee beans and coconut shell, with the potential other materials, including industrial wastes.

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From waste to fuel: could the lifecycle of the banana now include hydrogen fuel cells?

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1. Name three elements found in carbohydrates.
2. Explain why this process could be a sustainable source of hydrogen.
3. Hydrogen is used in fuel cells. Describe how hydrogen reacts in a fuel cell.