



Universität
Bremen



Fachbereich 4
Produktionstechnik
Maschinenbau &
Verfahrenstechnik

People 4
Production

Heat Happens: Thermodynamics in Daily Life

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The State of Matter




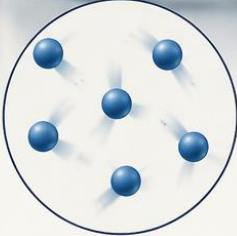
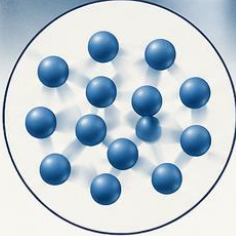
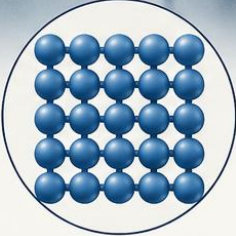
Gas phase

- Ideal gas
- Real gas

Condensed phase

- Incompressible substance

THE THREE STATES OF MATTER

GAS	LIQUID	SOLID
		
		
Particles are far apart and move freely.	Particles are close together and can slide past each other.	Particles are tightly packed in a fixed position.

Matter, Temperature & Energy

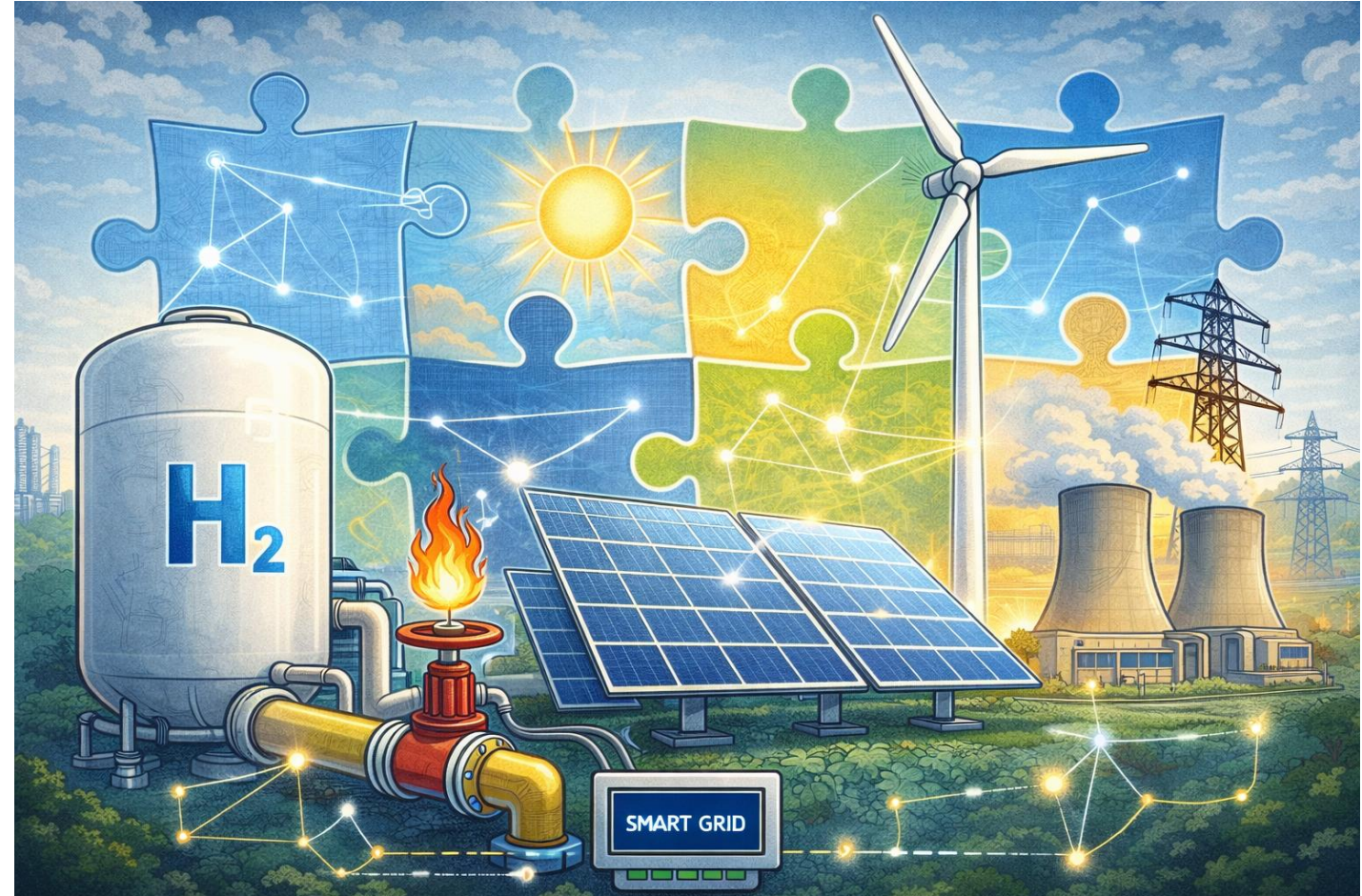
Internal Energy

Enthalpy

Heat capacity

Zeroth Law of Thermodynamics

First Law of Thermodynamics



Limits of Energy Conversion

Entropy

Second Law of Thermodynamics

Third Law of Thermodynamics



AKW, Quelle: www.focus.de