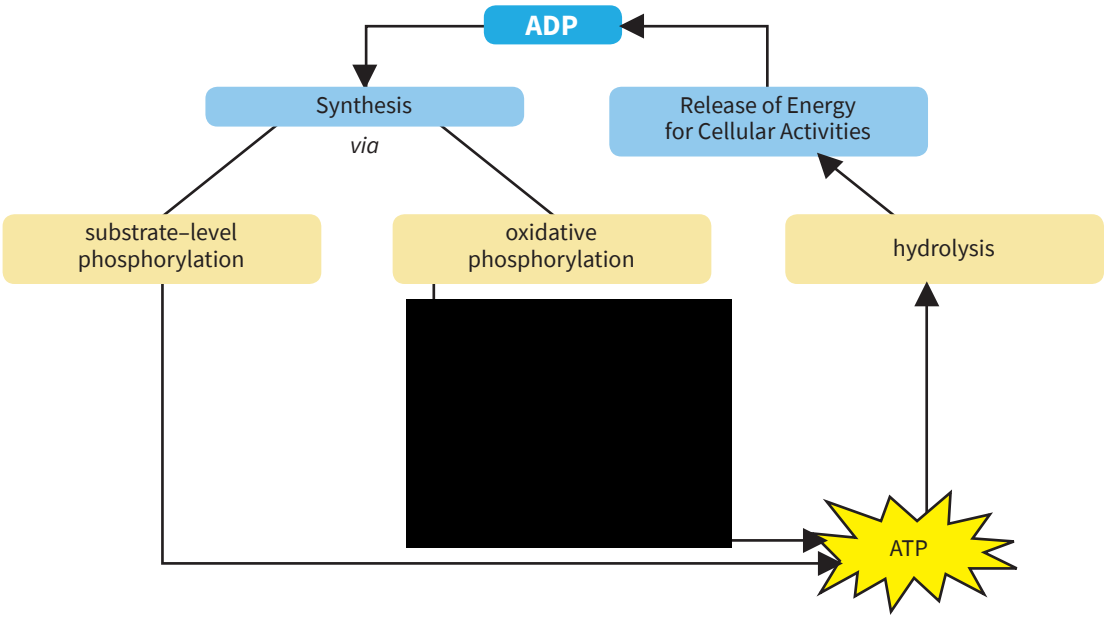
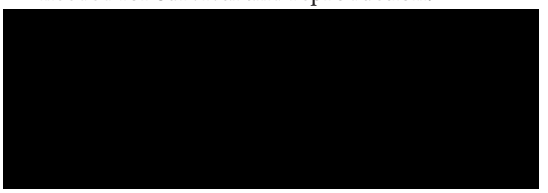



- Extracting stored energy from energy-rich molecules require the release of high-energy electrons (oxidation) that are then received by another molecule (reduction).
- All living cells need energy to perform processes needed for survival and reproduction.



- ATP couples catabolic and anabolic reactions.
- ATP hydrolysis by ATPase removes a phosphate group from ATP and releases energy.

- Chemiosmosis happens in the mitochondria and the chloroplast.

## KEY TERMS

energy coupling
hydrolysis
mitochondria
oxidative phosphorylation
redox reactions
substrate-level phosphorylation