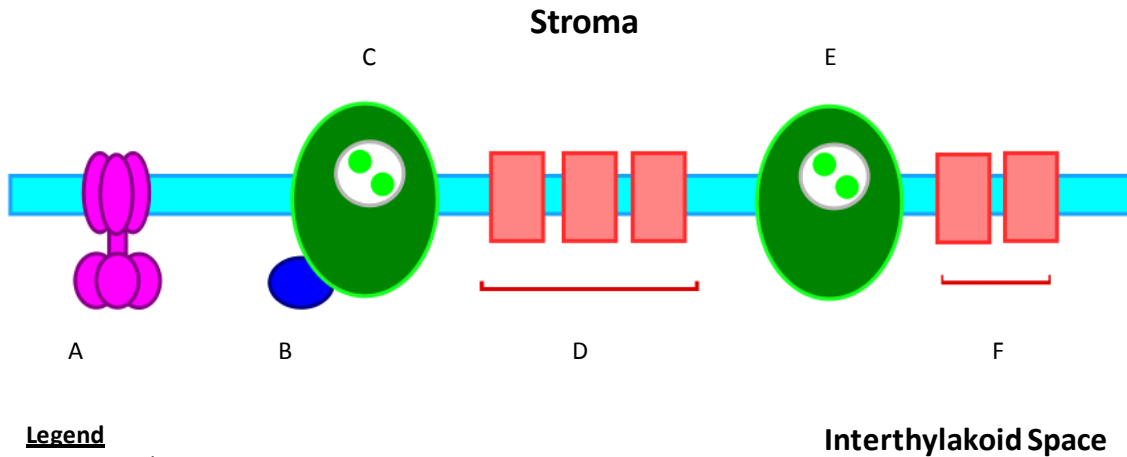


# Light Dependent Reaction

Sunday, February 28, 2010  
5:45 PM

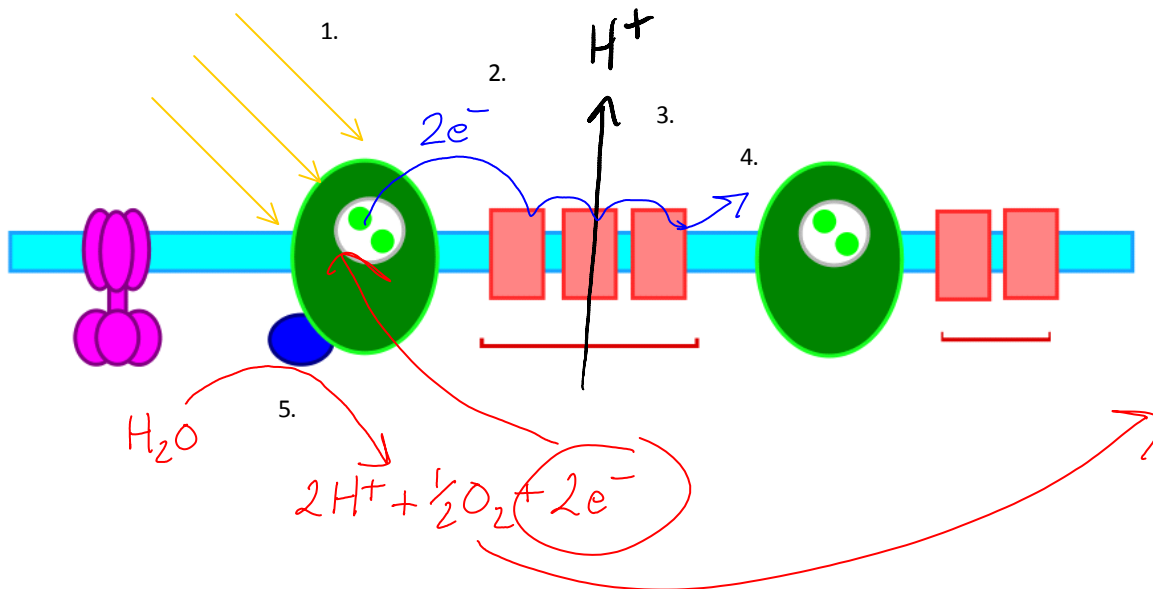
## Structure of Light Dependent Reaction Machinery.



### Legend

- A. ATP Synthase
- B. Water Breaking Enzyme
- C. Photosystem II (with Reaction Center)
- D. Electron Transfer Chain II
- E. Photosystem I (with Reaction Center)
- F. Electron Transfer Chain I

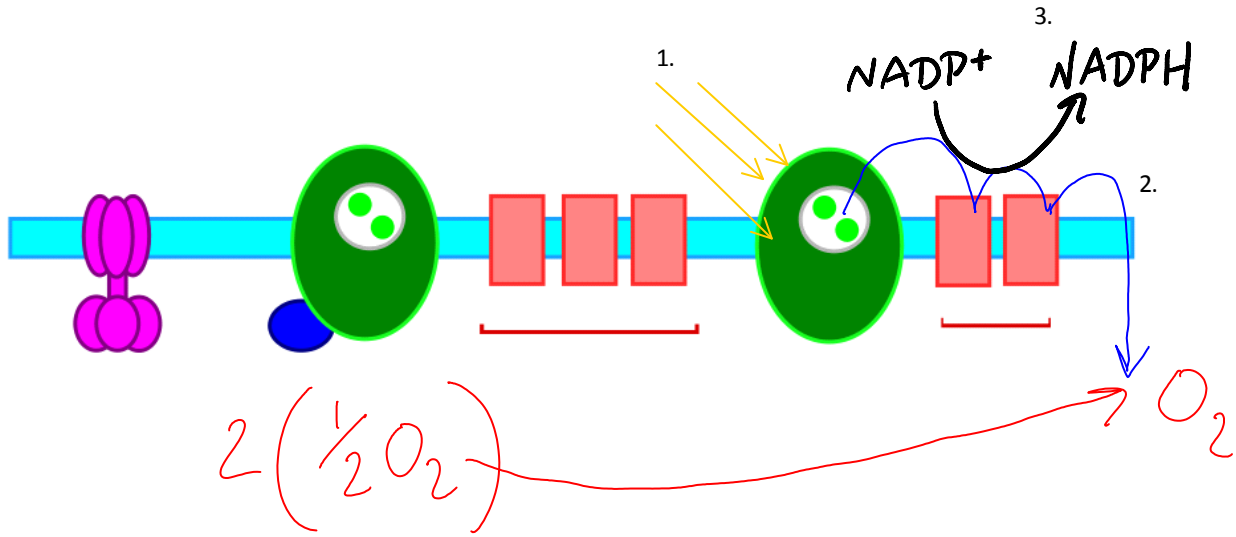
### Stage 1: Boosting of Electrons by light



### Legend

1. Light is focused by antenna complex onto Reaction Center where two electrons are boosted out.
2. Electrons are captured by ETC2 and passed along the chain.
3. Energy from electrons powers the active transport of hydrogen ions to the stroma.
4. Electrons are passed to the empty electron holes in the reaction center of Photosystem I.
5. Water Breaking Enzyme fractures water, liberating electrons that fill the holes in the Reaction Center for Photosystem II.

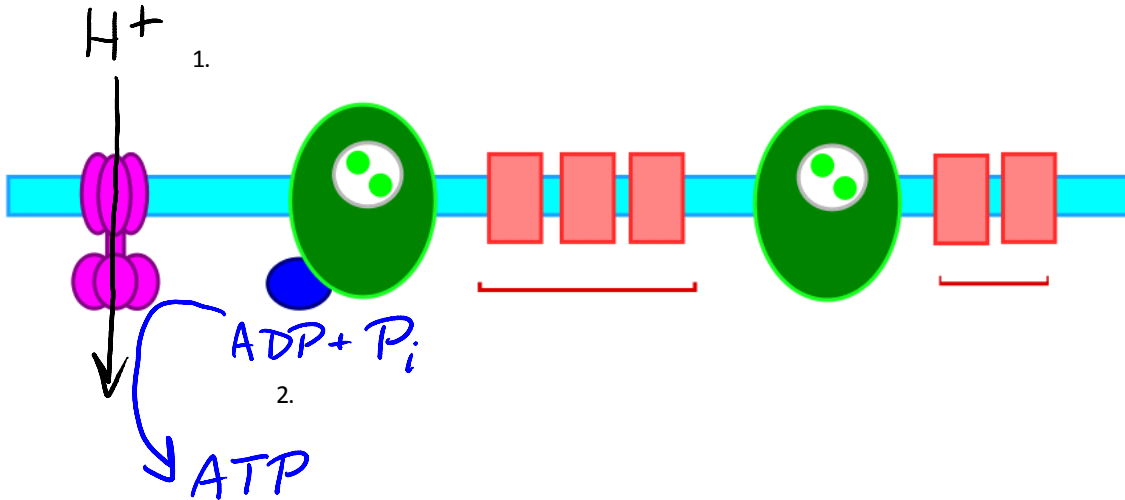
**Stage 2: Electrons pass through Photosystem 1.**



**Legend**

1. Light is focused by antenna complex onto Reaction Center where two electrons are boosted out.
2. Electrons pass through ETC1 until they combine with the oxygen from the previous stage to produce molecular oxygen.
3. Energy is used by ETCs to make NADPH.

**Stage 3: Final Energy Generation**



**Legend**

1. Hydrogen ions pass through ATP Synthase.
2. ATP is generated by enzyme.