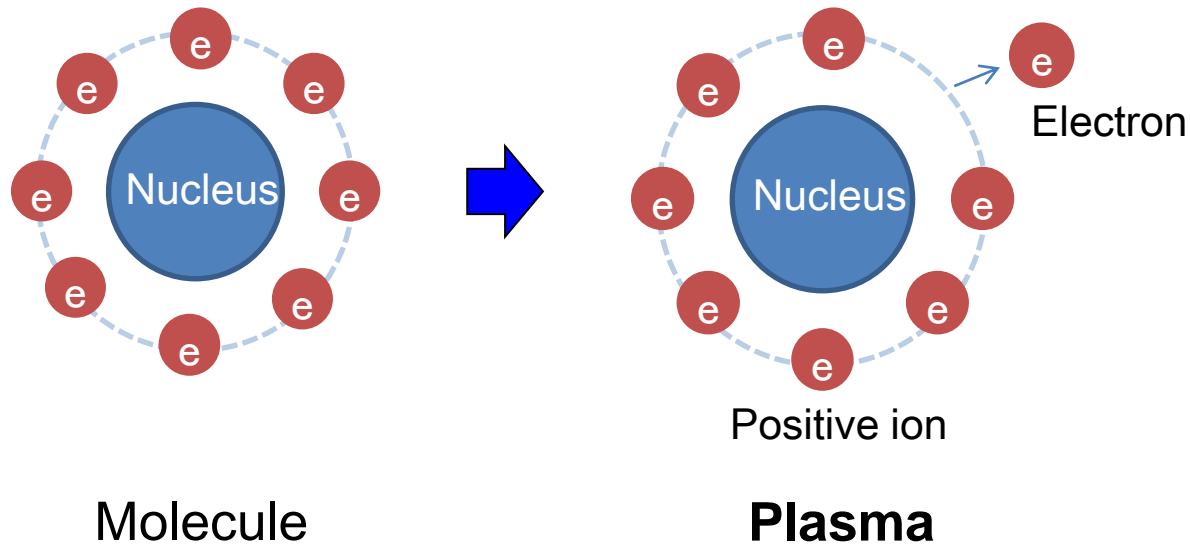


About plasma surface treatment

What plasma?

- Gas molecules are ionized to positive ions and electrons.
- The numbers of positive ions and electrons are same, and macroscopic state is neutral.



About plasma surface treatment

What kind of treatment?

- Chemical bonds of substrate are cut creating new reactive functional group (COOH, OH, etc.) by collision of high energy ions and electrons.
- Substrate surface is cleaned by plasma treatment.

Example: Change of contact angle of water by plasma treatment

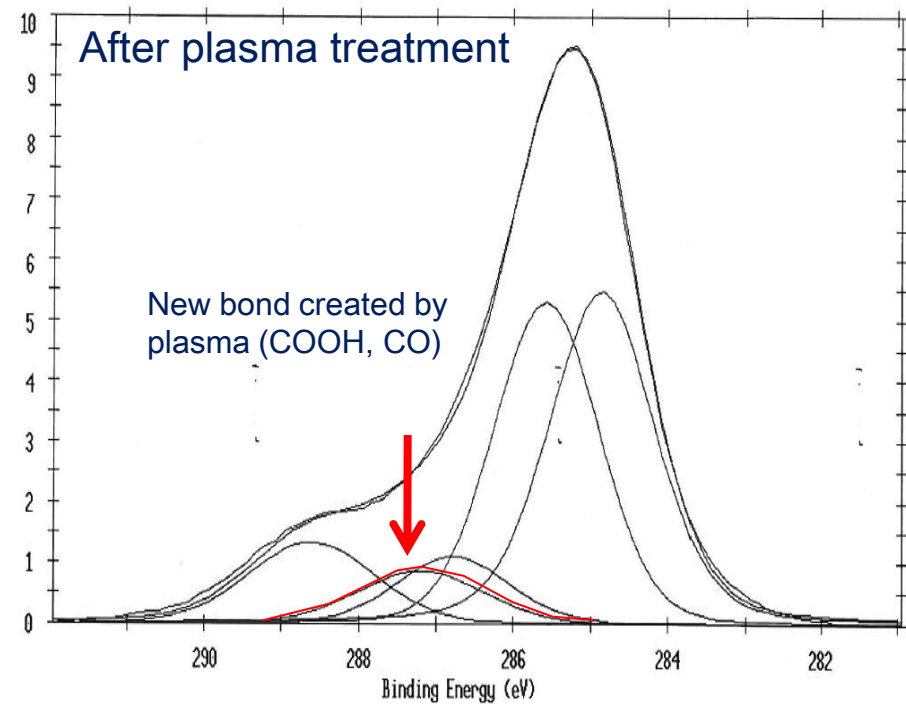
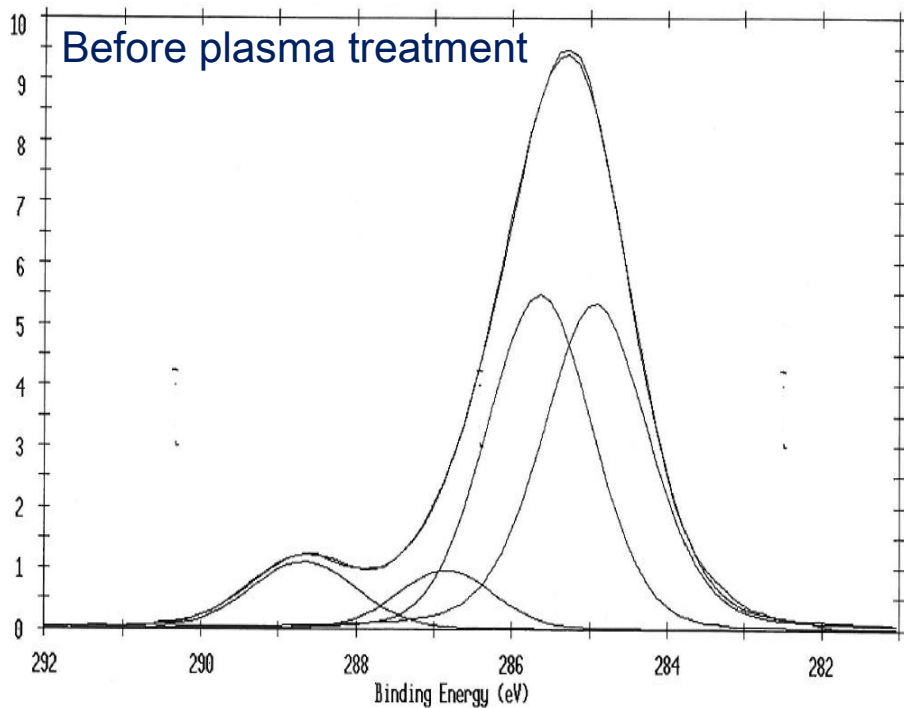


Effect of plasma treatment

Example of XPS measurement result

Polyimide film

Orbit of C1s



Polar group which works for good adhesion is created by plasma treatment

Plasma apparatus

Features : Roll to roll plasma treatment under vacuum condition

- 1) Treatment under vacuum background lower than 1Pa
 - Various kinds of plasma gas are selectable.
 - Treatment with mixed gas is available.
- 2) Stable treatment by glow discharge
 - Uniform and long-live treatment is available by high density plasma.

【Apparatus image】

