Again, by maintaining pressure within the plasma chamber between pre-treatment and exposing the substrate to the first polymer layer the previously mentioned advantages may be realised.

The method may include reducing the flow of the pre-treatment precursor (e.g. to zero flow) concurrent with increasing the flow of the first polymer precursor.

According to a fourth aspect of the invention, we provide a substrate comprising a surface having a polymer coating formed thereon by a plasma polymerisation method according to the first aspect.

The surface of the substrate may include a metal element, a metalloid element or a combination thereof prior to having the polymer coating deposited thereon.

Pre-treatment step

The pre-treatment step may be optional.

In embodiments including the pre-treatment step, the pre-treatment precursor may include one or more reactive gases, such as hydrogen and oxygen, one or more etching agents such as tetrafluoromethane, or one or more inert gases, such as argon, nitrogen or helium.

The pre-treatment precursor is energised to form a pre-treatment precursor plasma which is exposed to the substrate to clean and / or activate the surface thereof.

First polymer layer