
Development of Plasma Skincare Devices for Human and Animal and It's Applications

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Portable plasma skin care device for human(Plabeau TM),for pet(Plapet TM) and for hair(Plahair TM) are developed.

For the portable plasma device, we made very small high voltage (~ 5 kV), very short (~ 80nm(FWHM)) pulse power supply. We can reduce ozone generation and arcing between electrode and skin with this power supply. It is very difficult to make large area plasma in atmospheric pressure. We made electrode not square or round but rectangular because of scanning efficiency. By scanning the plasma device, we can treat more wide range of skin area. We use alumina i.e Al₂O₃ for dielectric material because of it's high dielectric constant and physical strongness.

We have a lot of data(before and after image) for application of plasma skin care devices. For human use, atopy, acne and athlete's foot can be effectively cured and remove wrinkle and pigmentation by using plasma. For pet use, we can see the plasma effects for atopy, skin disease and hair growth. We think all this is owing to plasma sterilization and skin regeneration.