Grey/white hair removal using an artificial chromatophore (the carbon atom dye) and 810 diode/micro second for mode of the Q-switched 1064: USFDA device

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Hair removal is an ambiguous term, as the patients believe 100% hair will be gone, but even in the best candidate with fair skin tone and dark hair this is not usually possible. US-FDA defines it as stable decrease in the number of terminal hairs for a period longer than the complete hair cycle at a given site following a treatment regime, which may include multiple sessions. Graying/lightening of hair either physiological or pathological poses a challenge. We shall now attempt to understand the possibilities for using a laser like diode 810 nm. Grey hair caused by depletion of melanocyte stem cell and gradual reduction in the number of pigment producing melanocytes and senile white hair has absence of tyrosinase activity which makes it difficult to target and thereby hampers in the treatment by hair reduction Lasers. In absence of histopathological studies, one might assume the carbon atom dye traverses up to the level of the hair root. We can deduct from the results that the artificial chromatophore travels down to the level of the hair root. There by providing a suitable target to our diode very much like the natural melanin of the hair and thereby causing the grey hair LHR to occur.

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