CONTENT

LIST OF TABLES

Page

LIST OF FIGURES

Page

Page

Page

LIST OF ABBREVIATIONS

AFM	Atomic Force Microscopy
a-C:H	Hydrogen doped Amorphous Carbon
CBM	Conduction Band Minimum
DC	Direct Current
DSSC	Dye-Sensitized Solar Cell
DLC	Diamond-Like Carbon
D peak	Disorder Peak
EDS, EDX	Energy-Dispersive X-ray Spectroscopy
FCVA	Filtered Cathodic Vacuum Arc
FCVAD	Filtered Cathodic Vacuum Arc Deposition
FTO	Fluorine Doped Tin Oxide
G peak	Graphite Peak
SEM	Scanning Electron Microscopy
TCO	Transparent Conducting Glass
TiO_2	Titanium Dioxide
ta-C	Tetrahedral Amorphous Carbon
ta-C:N	Nitrogen doped Tetrahedral Amorphous Carbon
UV	Ultraviolet

LIST OF SYMBOLS

$\mathbf{A}$	Projected Contact Area
d	Plasma's Duty Cycle
$\mathbf{F}$	AFM Measured Force
$\mathbf{F}_{max}$	Maximum Load which causes a constant penetration depth
FF	Fill Factor
H	Hardness
$\mathbf{x}$	Cantilever Deflection
J_{sc}	Short Circuit Current Density
J_{mp}	Current Density that provides Maximum Power
k	Spring Constant
κ	System Coefficient
κ_{eff}	Filter Efficiency
V_{oc}	Open Circuit Voltage
V_{mp}	Voltage that provides Maximum Power
$\overline{P}$	Average Deposition Power
P_m	Maximum Power Provided by DSSC
P_{in}	Input Light Source's Power
n_0	Raman Laser Frequency