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The effect of TEOS/O2 pressure ratio on the silicon oxide films deposited by PECVD MARZIEH ABBASI FIROUZJAH, SEYED IMAN HOSSEINI, BABAK SHOKRI, MAHDI SHARIAT — The effects of the silicon precursor to the oxygen pressure ratio on the properties of silicon dioxide thin films were studied. The films were deposited by organometallic based plasma enhanced chemical vapor deposition method at low temperature. The organometallic tetraethoxy-silane was used as silicon precursor and oxygen was used as oxidant gas. The effects of the R (0.05–1.5) on the film characteristics such as structure and chemical composition, surface topography were evaluated by FTIR and AFM analysis. In addition, mechanisms of deposition phenomenon have been studied as related to the process parameters by using the optical emission spectroscopy and measurement of the film deposition rate.

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