

Abstract: Stabilization of a negative charge in polypropylene (PP) corona charged at elevated temperatures is investigated. Measurements of corona current and TSC (thermally stimulated current) yield the charging efficiency and the structure of the trapping levels, respectively. With increasing charging temperatures, the TSC peaks shift to higher temperatures, while the charging efficiency drops. This can be made up partially by prolonging the charging time. A continuous distribution of trap levels has to be assumed, and a new phenomenological theory is suggested. To explain the shift of TSC peaks, trapping and detrapping are taken into account.