

Antimicrobial Carvacrol-Containing Polypropylene Films: Composition, Structure and Function

Max Krepker¹, Ofer Prinz-Setter¹, Rotem Shemesh², Anita Vaxman², David Alperstein³ and Ester Segal^{1,4,*}

¹ Department of Biotechnology and Food Engineering, Technion—Israel Institute of Technology, Haifa 3200003, Israel; maks@campus.technion.ac.il (M.K.); oferp@campus.technion.ac.il (O.P.-S.)

² Carmel Olefins Ltd., P.O. Box 1468, Haifa 31014, Israel; Srotem@bazan.co.il (R.S.); Vaxman.anita@gmail.com (A.V.)

³ Department of Mechanical Engineering, Ort Braude College, P.O. Box 78, Karmiel 2161002, Israel; david@braude.ac.il

⁴ The Russell Berrie Nanotechnology Institute, Technion—Israel Institute of Technology, Haifa 3200003, Israel

* Correspondence: esegal@technion.ac.il

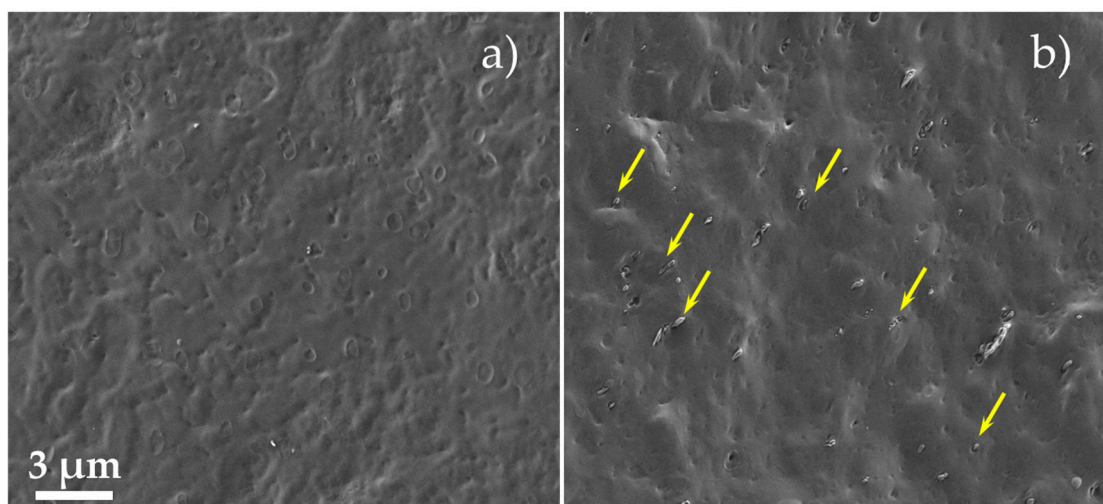


Figure S1. HR-SEM images of cryo-fractured cross-section of a) PP/carcacrol and b) PP/HNTs films. Several HNTs are marked with arrows for clarity.

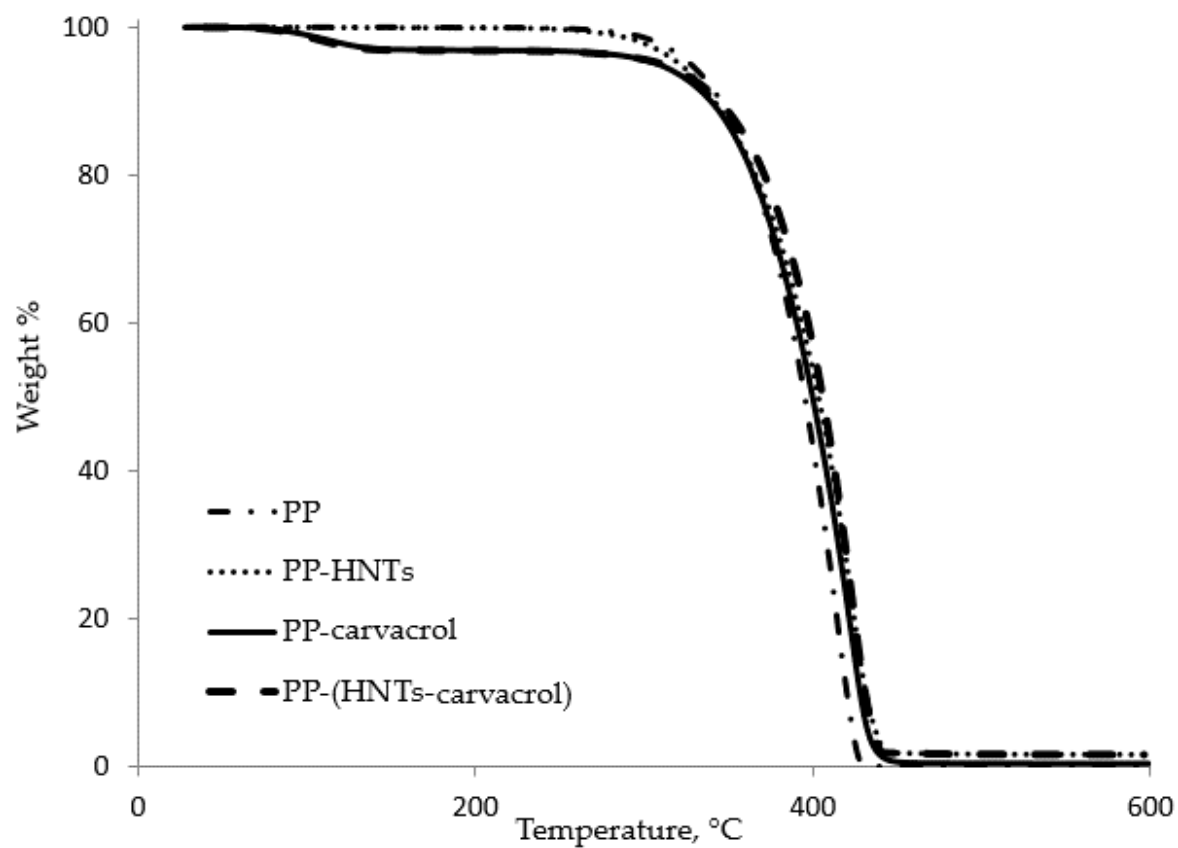


Figure S2. TGA thermograms of neat PP; PP/HNT; PP/carvacrol; and PP/(HNTs-carvacrol) nanocomposite films over the entire temperature region studied.

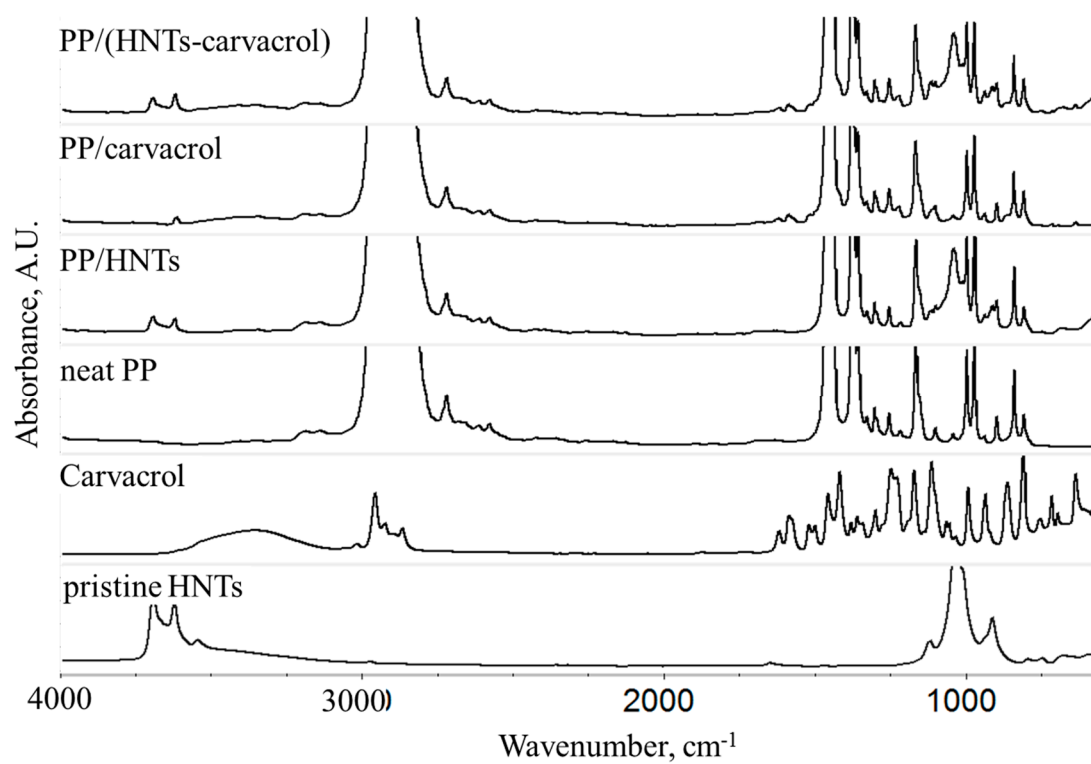


Figure S3. Full FTIR spectra (transmission mode) of pristine HNTs, CV, neat PP, PP/HNTs, PP/carvacrol and PP/(HNTs-carvacrol) films.