



Titre: Title:	Pheromones impregnated on porous PLA fibers for integrated pest management. Supplément
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Date:	2026
Type:	Article de revue / Article
Référence: Citation:	Klassen, D., Pouchet, C., Simon, W., Smith, I., Lemoine, N., Blais, B., Larose, M., Chouinard, G., Karthikeyan, A., Dumont, M.-J., & Tavares, J. R. (2026). Pheromones impregnated on porous PLA fibers for integrated pest management. <i>Journal of Polymers and the Environment</i> , 34(5), 99 (16 pages). https://doi.org/10.1007/s10924-026-03827-1

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 **Document publié chez l'éditeur officiel**
Document issued by the official publisher

Titre de la revue: Journal Title:	Journal of Polymers and the Environment (vol. 34, no. 5)
Maison d'édition: Publisher:	Springer Science+Business Media
URL officiel: Official URL:	https://doi.org/10.1007/s10924-026-03827-1
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Pheromones impregnated on porous PLA fibers for integrated pest management (IPM)

Journal of Polymer and the Environment

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Supplementary information: Figures and tables



Figure S1: Environmental chamber

Table S1: Windspeed settings used during pheromone release experiments

Windspeed (km/h)	Reynold's number (channel)	Reynold's number (sample)
0	0	0
1.3	5691	869
1.6	7005	1070
1.8	7880	1204
4	17512	2675
5.8	25393	3880
8.3	36338	5552
12.5	54727	8362
16	70050	10703

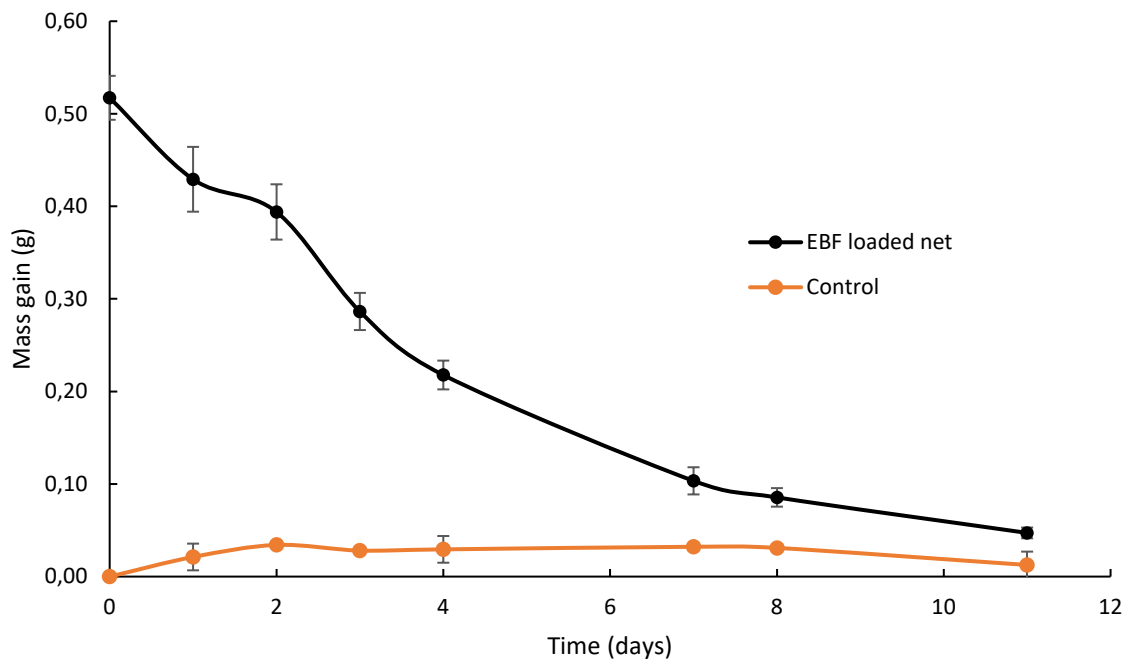


Figure S2: Comparison of control net (no pheromone) with EBF mass loss tests

- 3 traitements
- Témoin
- Filet (sans EBF)
- Filet +EBF

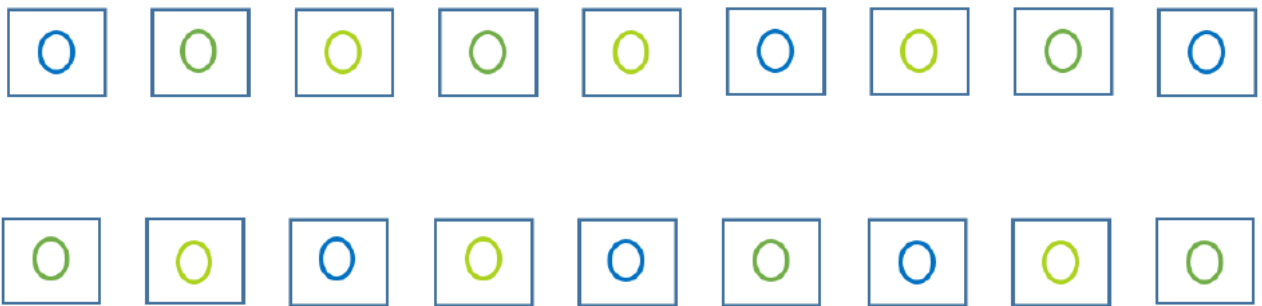


Figure S3: Distribution of trees in field tests

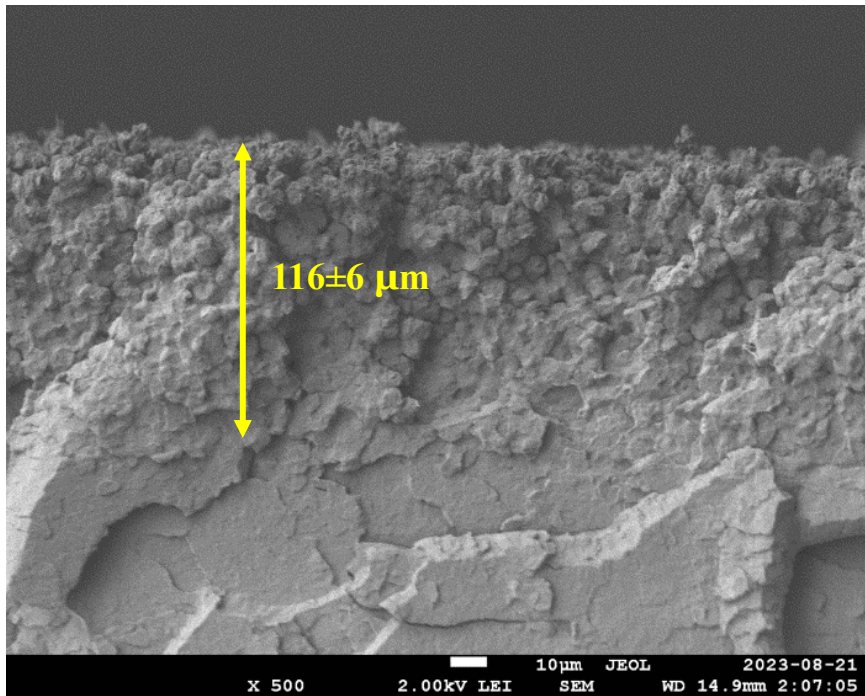


Figure S4: SEM image of a cross-section of an amorphous PLA disk treated by DDD. Yellow arrow indicated the thickness of the porous layer created by DDD

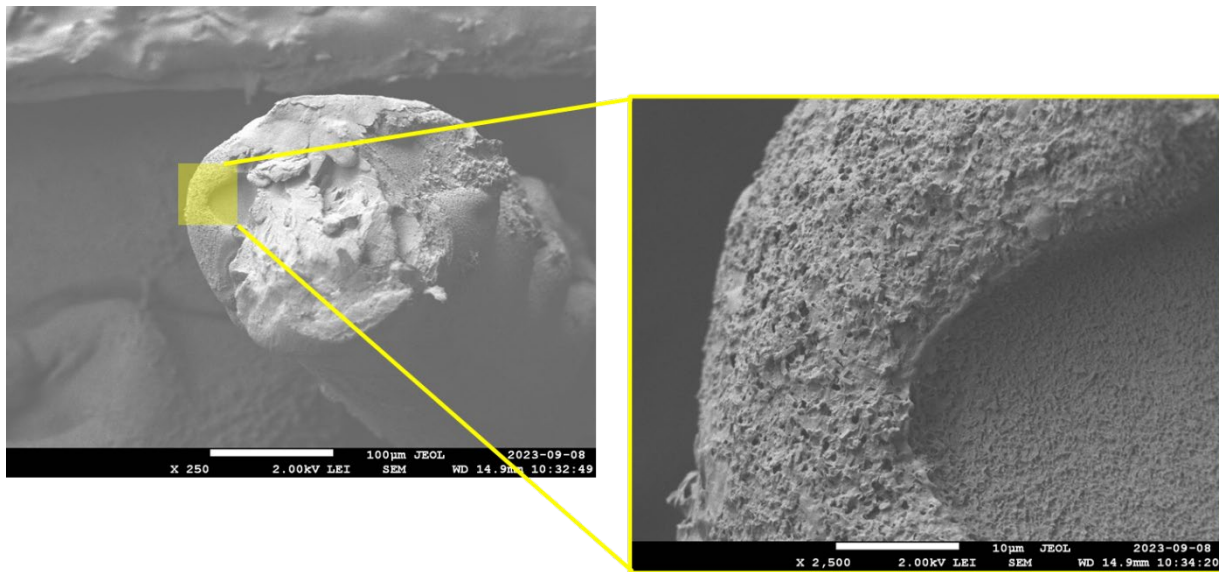


Figure S5: SEM images of a cross-section of a DDD treated PLA fiber

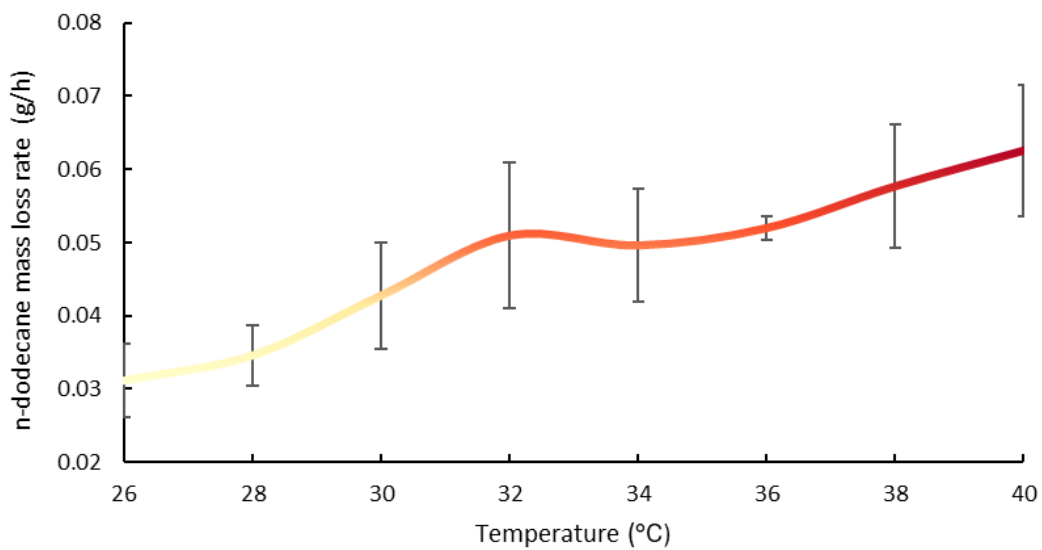


Figure S6: Mass loss rate of n-dodecane during the first two hours of evaporation as a function of temperature. Error bars represent 95% confidence intervals, natural log time scale used, lines are to guide the reader's eye.

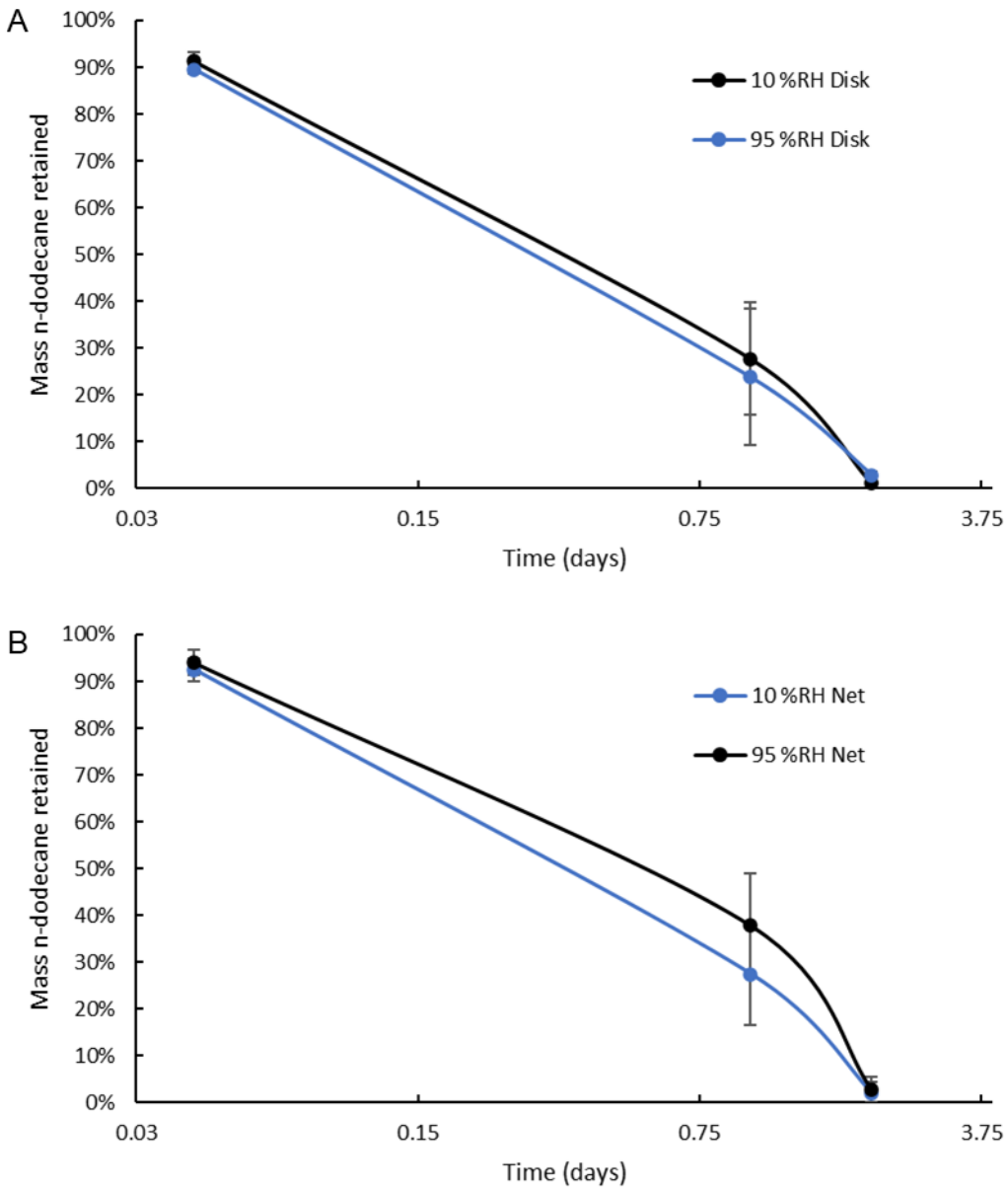


Figure S5: *n*-dodecane mass loss from (A) untreated multifilament nets and (B) DDD treated multifilament nets at 10 %RH and 95 %RH. Error bars represent 95% confidence intervals, natural log time scale use, lines are to guide the reader's eye.

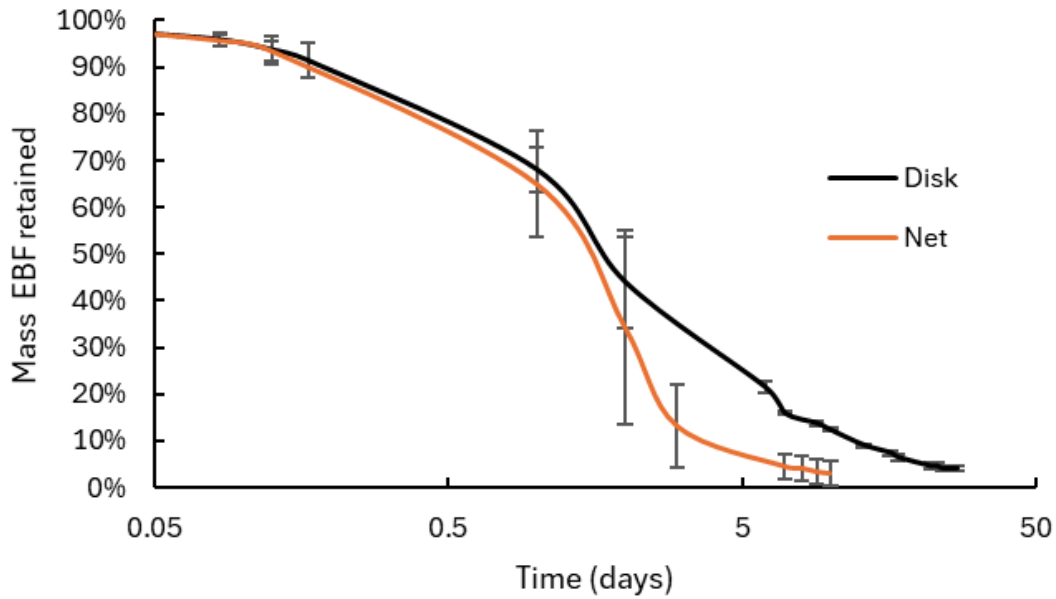


Figure S6: EBF mass loss from DDD treated disk multifilament net under standard lab conditions. Error bars represent 95% confidence intervals, natural log time scale used, lines are to guide the reader's eye.

Table S2: Mean number of apterous aphids per treatment and for each sampling day per years of experiment.

Year	Day	Aphid count per treatment (mean)		
		Control	Net	EBF
2023	0	15	15	15
	3	45.8	33.6	24.0
	6	54.2	43.3	18.3
	8	41.7	49.7	24.7
	10	78.2	75.5	33.7
	13	103.5	79.2	21.5
	15	212.7	148.7	41.5
	17	241.2	203.3	42.7
	20	420.3	329.0	65.5

2024	0	15	15	15
	4	82.3	70.0	76.5
	7	119.8	91.7	91.3
	11	279.7	233.0	190.5
	14	410.0	330.5	261.5
	18	211.2	110.7	119.8
	21	180.2	128.2	124.2
