

Abstract Submitted
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Deposits of drying drops of a nanotube suspension¹ MIN-
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METALMECANICA COLLABORATION, CENTRO DE INVESTIGACION EN
ENERGIA COLLABORATION — We have made observations of the pattern
formed by deposits of an evaporating sessile drop of a carbon nanotube suspension.
The nanotubes are chains of carbon molecules, 2 nm diameter and approximately
15 micrometers long. The suspension concentration is 0.25 mg/ml and initially, the
drops volume is 2 μ l. Nanotubes are transported by the flow generated by evapora-
tion at the surface of the drops and the resulting patterns are the result of the drag
of the filaments by the fluid motion. The pattern observed is composed of a circular
band with several (order ten) spots with higher concentration of nanotubes. Also,
the inner rim of the band displays a higher concentration of nanotubes. In contrast
to similar observations where the suspensions are prepared with microspheres, no
ring formation at the outer edge of the initial footprint of the drop (coffee effect) is
clearly identified. Our observations are interpreted in terms of existing theories.

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