3-OCTADECANOYLPYRROLE

Nanoprobes

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PRODUCT INFORMATION

3-OCTADECANOYLPYRROLE (3ODOP)

Product Name:	3-OCTADECANOYLPYRROLE
Catalog Number:	3ODOP
Appearance:	Pale purple powder
Revision:	1.2 (March 2000)

GENERAL INFORMATION

3-OCTADECANOYLPYRROLE is a surface-active pyrrole derivative which may be oxidised to form a highly conductive molecular monolayer. It may be mixed with pyrrole and applied to a water surface containing ferric chloride ($FeCl_3$). Langmuir-Blodgett techniques may be used to control the film produced.

3-OCTADECANOYLPYRROLE is supplied pure, as a powder. It should be refrigerated upon receipt, and stored at 2 - 8°C.

INSTRUCTIONS FOR USE

Formation of EM substrate films:[1] Cast a solution of the pyrrole in ethyl acetate (0.0015 g/mL) onto an air-water interface where the water contains 1 wt % ferric chloride. Free pyrrole as a vapor is added to initiate polymerization (place both the solution and an open container of pyrrole under a bell jar); the films may be controlled by using dental floss to control their spread, or more effectively by using a Langmuir-Blodgett trough for their generation. Drop the grids onto the film, then pick them up, wash as for thin carbon films, and apply the sample as usual.

General: Detailed instructions for monolayer formation, oxidation and monolayer manipulation are described by Hong et al.[2] Pure 3-OCTADECANOYLPYRROLE, or 1 : 300 or 1 : 5000 mixtures with pyrrole, are applied to the surface of a 1 wt % ferric chloride solution, then washed with deionized water and 5 % HCl after oxidation. Highly conducting films may be prepared by the method of Bocchi,[3] using a solution of pure 3-OCTADECANOYLPYRROLE applied to the surface of a 10 wt % solution of ferric chloride.

REFERENCES

1. Simon, M. N.; Lin, B. Y.; Lee, H. S.; Skotheim, T. A., and Wall, J. S.: *Proc. XIIth Int. Congress for Electr. Micr.*, San Francisco Press, Inc., San Francisco, CA, **1990**; Vol. 1, pp. 290-291.

2. Hong, K., and Rubner, M. F.; *Thin Solid Films*, **1988**, *160*, 187; Hong, K.; Rosner, R. B., and Rubner, M. F.; *Chem. Mater*, **1990**, *2*, 82.

3. Bocchi, V., and Gardini, G. P.; *J. Chem. Soc. Chem. Commun.*, **1986**, 148.

Technical Assistance Available.

For a complete list of references citing this product, please visit our world-wide-web site at http://www.nanoprobes.com/Ref.html.