NEW!

PPV and Other Conjugated Polymers, Precursors, and Dopants

The 2000 Nobel Prize in Chemistry has been awarded to Alan J. Heeger, Alan G. MacDiarmid, and Hideki Shirakawa for the discovery and development of conductive polymers.[1] Their discovery in 1977 that the conductivity of polyacetylene can be increased by 13 orders of magnitude upon doping with electron acceptors and electron donors virtually created the new field of conductive polymers.[2] Since this promising start, the properties of conjugated polymers have been expanded to make them semiconducting as well, making plastic electronics a reality.[3,4]

As you race to uncover new device applications for these versatile materials, Aldrich seeks to assist you by offering high-quality **conjugated polymers, precursors, and dopants**. Listed below are some of our recent product additions from the PPV class as well as other conductive polymers and dopants. For a comprehensive list of **polymers, monomers and additives**, visit our Web site at www.sigma-aldrich.com. Email us at SAMS-USA@sial.com to request your ***FREE Aldrich Polymer Products CD–Catalog & Reference Guide,*** or contact your local Sigma-Aldrich office. Larger quantities of the products below may be obtained by contacting the Sigma-Aldrich Fine Chemicals division at safc@sial.com.

MEH-PPV

54,144-3	**Poly[2-methoxy-5-(2-ethylhexyloxy)-1,4-phenylenevinylene]**, average M_n *ca.* 51,000	**1g**
54,143-5	**Poly[2-methoxy-5-(2-ethylhexyloxy)-1,4-phenylenevinylene]**, average M_n *ca.* 86,000	**1g**
53,651-2	**Poly[2-methoxy-5-(2-ethylhexyloxy)-1,4-phenylenevinylene]**, average M_n *ca.*125,000	**1g**

PRECURSORS FOR MEH-PPV

53,625-0	**2,5-Bis(chloromethyl)-1-methoxy-4-(2-ethylhexyloxy)benzene**, 98%	**1g**
53,653-9	**2,5-Bis(bromomethyl)-1-methoxy-4-(2-ethylhexyloxy)benzene**, 98%	**1g**

PRECURSORS FOR UNSUBSTITUTED PPV

POLYMERIC

54,076-5	**Poly(*p*-xylene tetrahydrothiophenium chloride)**, 2.5 wt. % solution in water	**100mL**
54,077-3	**Poly(*p*-xylene tetrahydrothiophenium chloride)**, film	**500mg**

MONOMERIC

53,882-5	***p*-Xylylenebis(tetrahydrothiophenium chloride)**, 98+%	**5g**
37,708-2	***p*-Xylylenebis(tetrahydrothiophenium chloride)**, tech., 90%	**5g; 25g**

OTHER NEW CONDUCTIVE POLYMERS

53,068-9	**Polyaniline (emeraldine base)**, average M_n *ca.* 65,000 (Also available **47,670-6** with average M_n *ca.* 10,000)	**10g; 50g**
53,056-5	**Polyaniline (emeraldine salt)**, composite with carbon black	**5g; 25g**
52,328-3	**Poly(anilinesulfonic acid)**, 5 wt. % solution in water	**50mL**
53,057-3	**Polypyrrole** doped, composite with carbon black	**25g**

DOPANTS FOR CONDUCTING POLYMERS

52,295-3	**Dodecylbenzenesulfonic acid**, 70 wt. % solution in 2-propanol	**500mL**
52,296-1	**Dinonylnaphthalenesulfonic acid**, 50 wt. % solution in heptane	**100mL**
52,298-8	**Dinonylnaphthalenedisulfonic acid**, 55 wt. % solution in isobutanol	**100mL**

References: (1). Nobel e-museum Home Page. http://www.nobel.se/chemistry/laureates/2000/ (accessed Jan. 2001). (2). Chiang, C.K. et al. *Phys. Rev. Lett.* **1977**, *39*, 1098. (3). Chandrasekhar, P. *Conducting Polymers, Fundamentals and Applications,* (Aldrich Catalog No. Z42,253-3). (4). *Handbook of Organic Conductive Molecules and Polymers,* Nalwa, H.S. Ed., John Wiley & Sons: New York, 1997 (4 volume set – Aldrich Catalog No. Z53,928-7).