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To scintillate

“If it’s conjugation you want, then conjugation you shall have,” we synthetic organic chemists said to the physicists, who seem to be so set these days on finding new and better scintillation phosphors for their counters. One very highly conjugated molecule we could see a chance of producing and isolating with reasonable success was p-Quaterphenyl. We didn’t worry too much about its ability to form sizable crystals because the physicists have been telling us lately that they can work with solutions instead of single crystals, if need be. To the future we left the problem of finding a suitable solvent.

First we had to capture our p-Quaterphenyl. We knew there was some present in the residue from the manufacture of biphenyl, but in that coal-like conglomerate it was bound to prove elusive. Instead, we put our heads together with a friend who teaches chemistry at a college an hour’s drive away and is always looking for worthy projects to throw at his students. From our discussion, two routes to purified p-Quaterphenyl emerged. We selected one, and two young men then embarked on an instructive experience that began with an Ullmann reaction of iodobiphenyl with copper powder and concluded as 600 grams of Eastman 6866. With scintillation so warm a topic, we expect the initial batch will not dwell long on our shelves, but we wouldn’t want to bet one way or the other.

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5. Details of the Mechanics Building and downtown hotels.
6. Titles of the latest foreign and domestic scientific films to be shown in the AAAS Science Theatre.
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4. Historical sketch and organization of the Association—and the new Constitution and Bylaws.
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