

It was expected in those days that any serious chemistry student would continue his vocation by trying to obtain a doctor's degree in his subject from his University, London in my case. Such a degree is still called in Latin to this day a Ph D [*Philosophiae doctoris*], in many, but not all Universities. This was also my wish, but of course finance for a further two years of academic life had to be secured. As my father was not allowed to transfer any money abroad from Germany, he had to use a subterfuge. He had a rich American patient, who was most kindly prepared to send me an allowance of £ 5 a week and to receive the equivalent in German Marks from my father while the American benefactor's business kept him in Berlin. I wish I had been told his name or anything else about him—I never met him—in order to thank him later, but this was not possible.

The first step, after a promise from my father that my weekly £ 5 would continue even after graduation, was to find what the Germans call so aptly a *Doktorvater*, a senior lecturer or Professor who was prepared to teach a raw graduate the mysteries of chemical research. Of course he himself would gain from this arrangement, as he would obtain, without a fee, an assistant in his own chemical research. A gamble for both parties of course, but one that has stood the passage of time, and there seem to be few cases where it has not worked very well.

I was lucky that a Senior Lecturer, R. Patrick Linstead, was prepared to take me on. R.P.L. as we used to call him, was working on phthalocyanines, a strong and deep blue pigment, which was precipitated from concentrated sulphuric acid and hence extremely stable. I believe he had a grant for his research from ICI, the famous Imperial Chemical Industries who must have been very satisfied with his results. These phthalocyanines, eventually available in many different colours, formed the basis for the colours sprayed onto automobiles, a very large market for ICI. One small sub-subject in his researches was the question of de-hydrogenation, and that was allocated to me.

In November 1939, when I had typed my thesis, it was submitted to London University. It was entitled: *The Dehydrogenation of alicyclic Compounds and terpenic Ketones in the liquid Phase*. After an oral examination by two external examiners of London University, as R.P.L. was by then Professor of Chemistry at Harvard University, and of course could not return for my 'oral' as World War II had started, I was awarded my Ph D. Part of my thesis was published in a joint paper with R.P.L. in the *Journal of the Chemical Society, London* in 1941. [See Appendix II, Bibliography, Title 428]