Substituent-Dependent Stabilization of Organic Free Radicals: Synthesis and Reactions.

Adding some more free radicals to Professor Nozoe's book is a real pleasure and an honour:
$Ar_2C^{\bullet}-R$: do they dimerize? Not, when p-substituted (R=e.g. tBu)
When, then how? That depends on slight changes in R.
α,α-(long sought for), α,p-, and such exotic birds like enol ethers $Ar_2C=\underset{\displaystyle R}{\overset{|}{C}}-O-CAr_2$ are competing dimers.

A few tenths of a kcal often are decisive in radical chemistry, here also in 1,2- versus 1,4-additions to C=C-C≡N systems.

And the capto-dative concept of radical stabilization? There is none, at least no general one. But, the concept stimulated so many new works.

$-\underset{|}{\overset{|}{C}}^{\bullet}$ 20 years ago: Thought to be good only for polymerizations and physical org. chem., nonselective, nonspecific.
Now: Highly selective, highly specific!

Let us look for more synthetic applications, esp. with organometallic reagents!

Hiroshima, Oct. 5, 1988.

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