# Modification of material surfaces with nanometric organic layers derived from aryl diazonium salts

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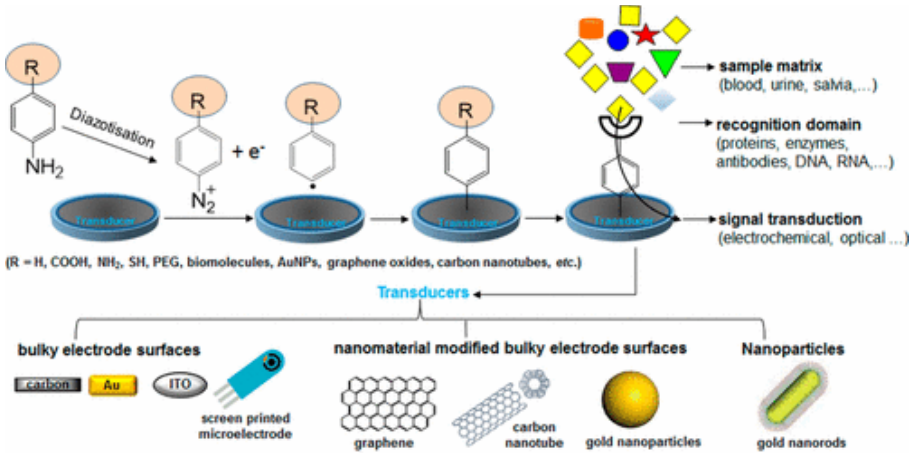
**Abstract**

Tethering material surfaces with very thin aryl films derived from aryl diazonium salts during their electro-chemical reduction is now a very common approach, Scheme 1. [1-4] The success of this method lies i) in the high reactivity of aryl radicals that attack surfaces of carbon (all types including graphene), metals and metal oxides and their nanoparticles, semiconductors including metal dichalcogenides $MX_2$, ii) the stability of covalently anchored layer and iii) the fast reaction that is performed under mild conditions.. [3-5] The attached organic layer improves the resistance of the materials toward their environment but it may serve also as a platform for further modification due to the presence of substituents in the benzene ring or for the attachment of nano-objects. This approach has found a lot of applications such as molecular junctions, optoelectronics, biosensors, click chemistry, composite materials, etc. [6-7]




Scheme 1. Aryl radicals are prone to attach to many materials surfaces. [4]

## References

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