What is claimed is:

1. A catalytically active substance, comprising:

a copper (I) sulfide mineral particle; and

an alkyne functionalized molecule bound directly to a surface of the copper (I) sulfide mineral particle.

2. The catalytically active substance as defined in claim 1, wherein one or more of the following:

a. the copper (I) sulfide mineral particle is selected from the group consisting of chalcocite, djurleite, and digenite;
b. wherein the alkyne functionalized molecule is a primer having an alkyne functional group attached at the 5’ terminus of the primer;
c. wherein a coordinate bond binds the alkyne functionalized molecule to the surface of the copper (I) sulfide mineral particle.

3. A method of making a triazole, comprising reacting an alkyne functionalized molecule with an azide functionalized molecule in the presence of a copper (I) sulfide mineral.

4. The method as defined in claim 3, wherein at least one of:

a. the copper (I) sulfide mineral reacts with the alkyne functionalized molecule to form a catalytically active substance; and
the catalytically active substance reacts with the azide functionalized molecule to couple the catalytically active substance with the azide functionalized molecule, and
b.
i. wherein prior to reacting the copper (I) sulfide mineral with the alkyne functionalized molecule, the method further comprises adding a stoichiometric excess of the copper (I) sulfide mineral, with respect to the alkyne functionalized molecule, to the alkyne functionalized molecule or
ii. wherein the reacting of the copper (I) sulfide mineral with the alkyne functionalized molecule involves:

forming a mixture of the copper (I) sulfide mineral, the alkyne functionalized molecule, and a solvent of the alkyne functionalized molecule; and

maintaining the mixture at a temperature that is above a freezing point of the solvent and below a boiling point of the solvent for a time up to about 50 days.

5. The method as defined in claim 4bii, wherein either or both of the following:

a. the solvent is selected from the group consisting of water, a sodium carbonate buffer, a potassium phosphate buffer, and dimethyl sulfoxide; and
a pH of the mixture ranges from about 4 to about 12 and

b. the maintaining involves heating the mixture to a temperature ranging from about 30°C to about 60°C for a time ranging from about 30 minutes to about 90 minutes.

6. The method as defined in claim 3 or 4a, wherein prior to reacting the alkyne functionalized molecule or the catalytically active substance with the azide functionalized molecule, the method further comprises forming a layer of the azide functionalized molecule on a surface of a flow cell substrate, and wherein the alkyne functionalized molecule or the catalytically active substance is reacted with the layer of the azide functionalized molecule on the surface of the flow cell substrate, optionally further comprising at least one of:

a. wherein the alkyne functionalized molecule or the catalytically active substance is present in a liquid mixture, and wherein the liquid mixture is flowed over the layer of the azide functionalized molecule on the surface of the flow cell substrate, and

b. wherein prior to forming the layer, the method further comprises attaching a silane or a silane derivative to the surface of the substrate to form a silanized surface.

7. The method as defined in any of claims 4-6, further comprising filtering unreacted copper (I) sulfide mineral from the catalytically active substance prior to reacting the catalytically active substance with the azide functionalized molecule.

8. The method as defined in any of claims 3-7, wherein at least one of:

a. the copper (I) sulfide has an average particle size ranging from about 500 nm to about 45 μm, and
b. wherein the method is performed without ligand coordination and without exposure to a reducing agent.

9. A graft mix, comprising:
a primer including an alkyne functional group;
a solvent; and
a copper (I) sulfide mineral.

10. The graft mix as defined in claim 9, wherein:
a. the alkyne functional group is to react with a surface of the copper (I) sulfide mineral to form a catalytically active substance in the graft mix, or;
b. x the graft mix further comprises an azide functionalized molecule, wherein the azide functionalized molecule is to react with the alkyne functional group, mediated by the copper (I) sulfide mineral, optionally;
wherein the azide functionalized molecule is a polymer, further optionally;
wherein the polymer is on a surface of a substrate, optionally wherein the substrate is a flow cell.

11. The graft mix as defined in any of claims 9-10, wherein at least one of:

a. the graft mix includes a stoichiometric excess of the copper (I) sulfide mineral with respect to the primer, optionally;

wherein the graft mix includes:
from about 1 μM to about 20 μM of the primer; and
from about 0.1 M to about 3 M of the copper (I) sulfide mineral, or;

b. the copper (I) sulfide mineral is selected from the group consisting of chalcocite, djurleite, and digenite, and has an average particle size ranging from about 500 nm to about 45 μm.

12. A method of grafting a primer to a flow cell surface, comprising:
reacting an alkyne functionalized primer in the presence of a copper (I) sulfide mineral with an azide functionalized molecule on the flow cell surface.

13. The method as defined in claim 12, wherein:

the copper (I) sulfide mineral reacts with the alkyne functionalized primer to form a catalytically active substance; and

the catalytically active substance reacts with the azide functionalized molecule to couple the catalytically active substance with the azide functionalized molecule on the flow cell surface, and optionally;

a. prior to reacting the copper (I) sulfide mineral with the alkyne functionalized primer, the method further comprises adding a stoichiometric excess of the copper (I) sulfide mineral, with respect to the alkyne functionalized primer, to the alkyne functionalized primer, or;
b. wherein the reacting of the copper (I) sulfide mineral with the alkyne functionalized primer involves: forming a mixture of the copper (I) sulfide mineral, the alkyne functionalized primer, and a solvent of the alkyne functionalized primer; and

maintaining the mixture at a temperature that is above a freezing point of the solvent and below a boiling point of the solvent for a time up to about 50 days, further optionally wherein at least one of;

i. the solvent is selected from the group consisting of water, a sodium carbonate buffer, a potassium phosphate buffer, and dimethyl sulfoxide; and

a pH of the mixture ranges from about 4 to about 12, and;

ii. the maintaining involves heating the mixture to a temperature ranging from about 30°C to about 60°C for a time ranging from about 30 minutes to about 90 minutes.

14. The method as defined in claim 13, wherein prior to reacting the catalytically active substance with the azide functionalized molecule on the flow cell surface, the method further comprises forming a layer of the azide functionalized molecule on the flow cell surface, and wherein the catalytically active substance is reacted with the layer of the azide functionalized molecule on the flow cell surface, optionally one or more of the following:

a. wherein the catalytically active substance is present in a liquid mixture, and wherein the liquid mixture is flowed over the layer of the azide functionalized molecule on the flow cell surface, or;

b. wherein prior to forming the layer, the method further comprises attaching a silane or a silane derivative to the flow cell surface to form a silanized surface, and;

c. wherein the layer of the azide functionalized molecule is poly(N-(5-azidoacetamidylpentyl) acrylamide-co-acrylamide).

15. The method as defined in claim 13 or 14, further comprising filtering unreacted copper (I) sulfide mineral from the catalytically active substance prior to reacting the catalytically active substance with the azide functionalized molecule on the flow cell surface.