Topic: Soluble Support

Synonyms:

Related Topics: Soluble Polymers, liquid-phase chemistry, PEG, dendrimers, fluorous synthesis, solid-phase synthesis

Definition:

An attachment, common to all library members, which renders the library components soluble under conditions for library synthesis, but which can be readily separated from most other soluble components when desired by some simple physical process.

This process has been termed liquid-phase chemistry.

Examples of soluble support include linear polymers, such as poly (ethylene glycol) (PEG), dendrimers, or fluorinated compounds which selectively partition into fluorine-rich solvents.

Some examples for the use of soluble support for combinatorial chemistry:

- synthesis and investigation of soluble polymer-supported dendrimers [4]
- alternative to solid-phase chemistry approaches for the preparation of arrays of compounds in the drug discovery process [3]
- synthesis of isoxazoles through a 1,3-dipolar cycloaddition [2]
- a viable alternative to the classical solid-phase approach [1]
- solid-phase radical cyclisation [5]

Structures:

Scheme 1:

Dendrimer and PEG

Dendrimer:
PEG:

Scheme 2:

Synthesis of a library of indolizines using poly (ethylene glycol) as soluble support

Publications:


Web-Links:

- [http://www.chem.ufl.edu/~duran/IGERT/enholm_malacria.htm](http://www.chem.ufl.edu/~duran/IGERT/enholm_malacria.htm) [5]
- [http://www3.interscience.wiley.com/cgi-bin/abstract/76507543/ABSTRACT](http://www3.interscience.wiley.com/cgi-bin/abstract/76507543/ABSTRACT) [7]
- [http://images.google.de/imgres?imgurl=http://www.thieme-connect.com/bilder/synlett/200407/u051_ga&imgrefurl=http://www.thieme-connect.com/ejournals/toc/synlett/3262&h=115&w=250&sz=6&tbnid=P0yBOImcIosWYM:&tbnh=48&tbnw=106&hl=de&start=48&prev=/images%3Fq%3DSoluble%2BSupport%26start%3D40%26svnum%3D10%26hl%3Dde%26lr%3D%26sa%3DN](http://images.google.de/imgres?imgurl=http://www.thieme-connect.com/bilder/synlett/200407/u051_ga&imgrefurl=http://www.thieme-connect.com/ejournals/toc/synlett/3262&h=115&w=250&sz=6&tbnid=P0yBOImcIosWYM:&tbnh=48&tbnw=106&hl=de&start=48&prev=/images%3Fq%3DSoluble%2BSupport%26start%3D40%26svnum%3D10%26hl%3Dde%26lr%3D%26sa%3DN) [8]