

Green Chemistry for Chemical Synthesis

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Abstract: *Green chemistry has been a major part of sustainable development and also had an important trend in recent years. In order to extrapolate the state of the work in this field, a systematic laboratory work has been performed, also it's is used to identify possible developments for future research. Now specially, the main aim of this research is to investigate how Green Chemistry, Sustainability and Circular Economy concepts are related to each other and how researchers are addressing and analyzing this relation. Since the main purpose of this chemistry is to produce intermediate substances that are generally used by other industries, this focus is mainly placed on industrial sector. Or we can say, chemistry involves most of production systems. Green chemistry for chemical synthesis define our future challenges and scopes in working with chemical procedures and products by inventing new reactions that can give maximum desired products and less or no by-products, designing new synthetic procedures and apparatus that can simplify operating in chemical productions, and to seek greener solvents that are environmentally and ecologically benign. Following basic principles of green chemistry should be followed:*

- 1) Prevention of waste or by-products.
- 2) Maximum incorporation of reactants in final products.
- 3) Minimization of hazardous products
- 4) To design safer chemical
- 5) To select most appropriate solvents
- 6) Use of catalyst should prefer.
- 7) Biodegradable products.
- 8) Such manufacturing plants should be designed to eliminate the possibility of accidents.

Keywords: Green Chemistry, Green Synthesis, Development of Green Chemistry, Principles of Green Chemistry, Application of Green Chemistry.

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