

6.2. Chemical Science Research

Synthetic materials have many applications in medicine, pharmaceuticals, food, construction, manufacturing industries, etc. Ethiopia is rich in resources (biological and non-biological) that can be used as input in material science and synthesis. The rich biological resources we have are opportunities to use natural products in an array of applications provided that efficient scientific methods of extraction, screening and isolation are put in place. With this great potential, a great deal of researches are required to advance knowledge in areas of material science using local resources that would inevitably be used to generate technologies for various applications.

The Chemical research sub-theme, therefore, set out a research priority to study 'Material Synthesis and Method Optimization for Natural Product Extraction and Trace Chemical Analysis' from the following specific project components stand point.

- Material synthesis (transition metal-chalcogens, conducting polymers, metal oxides/conducting polymers and metal-organic frameworks);
- Developing reaction methodology in synthetic organic chemistry;
- Exploration of new phyto-isolates;
- Method development for the extraction and isolation of trace chemical compounds;
- Utilization of locally available low cost materials for environmental remediation.