

TITLE OF PATENT:

FLUORESCENT SCHIFF BASE CHEMOSENSORS FOR METALS BASED ON 2,4-DIHYDROXY ACETOPHENONE

PATENTEE:

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PATENT NUMBER:

348008

SANCTIONED BY :

THE CONTROLLER OF PATENTS  
THE PATENT OFFICE  
GOVERNMENT OF INDIA

SANCTIONED DATE : 28.09.2020

VALIDITY: 20 YEARS

WHAT THE PATENT IS FOR:

1. Two new Schiff bases
2. Method of preparation of the new Schiff bases
3. Process of detection and recognition of metal ions by the new Schiff bases

The compounds for which this patent has been granted, are highly fluorescent in nature and find application as fluorescent chemosensors in the detection of metal ions, namely Aluminium(III), Iron(III) and Copper(II).

The compounds were synthesized by adopting a 100% eco-friendly method, without the aid of any sophisticated equipment and solvents, in a very less period of time and from easily available and less expensive starting materials, in the PG & Research Department of Chemistry, SeethalakshmiRamaswami College, Tiruchirappalli. The compounds could detect the aforesaid metal ions, even if they(metal ions) are present in traces of the order of  $10^{-7}$  Molar concentration. The detection process is not intervened by other metal ions. Since the detection process is reversible, the sensor compounds can be retrieved.

**Social Objective:** Though our day to day life is indubitably intertwined with the regular usage of many metals like Aluminium, Iron and Copper, these metals are proved to be the cause of many functional disorders like Alzheimer's disease, liver cirrhosis and brown or green rings in the cornea respectively, should their presence in our body exceed certain limit. Driven by the initiative and unremitting penchant to find out a compound of less cost and high efficiency to detect the presence of the aforesaid metals by an ecofriendly method, the patentee started working for the synthesis of such compounds in 2016. After many unflagging endeavours, the patentee finally accomplished the task.