Sous-vide also knows as Immersion cooking is a method of cooking with close temperature control usually done by sealing food in a plastic bag and immersing it in a temperature controlled water bath, sometimes called a water oven. The name Sous-vide is a misnomer. Sous-vide in French means vaccum sealed but the technique doesn't require vaccum sealing. The only requirement is to protect the food from contact with the water bath. Other sealing methods are common including using zip-lock bags. The key element that defines the technique is cooking in a water bath at a precise temperature.

A water oven is expensive so until recently this technique was mostly found in high end restaurants. Recently the cost has come down dramatically (low end well below $100) because of the introduction of immersion cookers. These look sort of like a stick blender and contain just a pump, water heater, and thermostat in a unit that can conveniently be put in any large pot or the water container of your choice. Since they are small storage is much easier. Amazon lists many versions at different price points.

This technique is most valuable where the relevent cooking chemistry is temperature dependent rather than time dependent. The classic example is steak. Beef reaches the well known conditions of rare, medium rare etc at precisely defined temperatures. If you cook steak to the right temperature for rare with an immersion cooker and keep it at that temperature it will stay rare for hours or even days. (It is also rare all the way through including the outside surface so it is common to finish it in a frying pan to add the desired char and Malliard flavors.)

Restaurants like this method for steak first because precise timing is not required and also because they can cook individual portions in the immersion cooker during non peak times then refridgerate. When the food is ordered it can be popped out of the bag and quickly finished, ready to served in a few minutes. The steak condition (rare etc) is guaranteed by the original immersion cooker temperature so the chance of a cooking mistake is lower. There are many foods with similar temperature dependant rather than time dependent cooking properties.

The Modernist Cooking movement has adopted and popularized this technique. Modernist chefs have developed a wide variety of recipies many of which can't be cooked any other way. As a result there are now many sous-vide cookbooks and web sites.