CLAIMS

1. A method for applying an anti-counterfeit signature on a product, comprising:

selecting a substrate and a type of signature; and

forming a signature of the selected type on the substrate with atomic layer deposition, ALD; wherein

forming the signature comprises applying at least one layer having a predetermined property configured to be detected with an analysis method on the substrate by atomic layer deposition, ALD, the signature being in the form of a code formed by layers having different thickness, each thickness corresponding to a predefined value in the code.

2. A method of claim 1, wherein forming the signature comprises applying a laminate structure of several layers on the substrate by atomic layer deposition, each layer having a property configured to be detected with an analysis method on the substrate by atomic layer deposition (ALD).

3. Method of any preceding claim, wherein applying the laminate structure of several layers comprises applying several layers having different predefined properties.

4. Method of any preceding claim, wherein applying the laminate structure of several layers comprises applying several layers comprising different materials.

5. A method of any preceding claim, wherein selecting a substrate comprises selecting whether the signature is applied directly to the product or on a separate substrate.

6. A method of claim 5, further comprising attaching the signature to a product, if the separate substrate is selected.

7. Method of claim 6, further comprising covering the substrate with a layer configured to enable the removal of the substrate from the product.

8. A method of claim 5, wherein the separate substrate comprises at least one of a grain, a sphere, a particle, a filament and a nanotube.

9. Method of any preceding claim, wherein the predefined property comprises at least one of thickness of the layer, isotope ratio of the material of the layer, relative ratio of the material of a layer, optical property of the layer, electrical property of the layer, and magnetic property of the layer.

10. Method of any preceding claim, wherein the analysis method comprises at least one of transmission spectroscopy, reflection spectroscopy, fluorescence spectroscopy, optical spectroscopy, atomic force microscopy (AFM), scanning tunneling microscopy (STM), computed tomography microscopy (CTM), focused ion beam (FIB), time-of-flight elastic recoil detection analysis (TOF-ERDA) and diffuse reflectance spectroscopy (DRS).

11. Method of any preceding claim, further comprising removing portions of the deposited layer or layers in order to provide a three dimensional structure.

12. An atomic layer deposition, ALD, reactor configured to perform a method according to any of claims 1 to 11.

13. A computer program, comprising:

code for performing a method of any of claims 1 to 11, when the computer program is run on a processor.

14. An apparatus comprising a processing means and a memory means, the memory means storing program instructions configured to cause the apparatus, when run on the processing means, to perform the method of any of claims 1 to11.