

# Four Dimensional (4D) Chinese Materia Medica Illustration and Record for 38 Chinese Materia Medica were developed and published at April and May 2017

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## Abstract

Four-dimensional (4D) illustration and record (length x width x height x time) for 38 Chinese Materia Medica were developed and captured by Sony HDR-TD30V Full HD 3D Handycam Camcorder at April and May 2017 and were published at Youtube. They are *Cinnamomum cassia*, *Saposhnikovia divaricata*, *Glycyrrhiza uralensis*, *Paeonia lactiflora*, *Atractylodes macrocephala*, *Aster tataricus*, *Poria cocos*, *Tussilago farfara*, *Bombyx Batryticatus*, *Citri Reticulatae Pericarpium*, *Ligusticum chuanxiong*, *Ziziphus jujube*, *Angelica sinensis*, *Codonopsis pilosula*, *Lycium barbarum*, *Dioscorea opposita*, *Astragalus membranaceus*, *Euryale ferox*, *Rehmannia glutinosa*, *Pseudostellaria heterophylla*, *Amygdalus Communis*, *Illicium verum*, *Morinda officinalis*, *Platycladus orientalis*, *Pinellia ternata*, *Zanthoxylum bungeanum*, *Eucommia ulmoides*, *Stomatella lutea*, *Lancer japonica*, *Alumen*, *Ophiopogon japonicus*, *Commiphora molmol*, *Rosa rugosa*, *Cinnamomum cassia*, *Cnidium monnieri*, *Zingiber officinale*, *Prunus mume*.

## Introduction

The ancient people recorded the Chinese Materia Medica in the way of carving at the surface of the cave, as well as bamboo. With the invention of paper, 2D (2-Dimensional) drawing is a way to illustrate and record Chinese Materia Medica. With the time elapsing, 2D camera development can capture 2D photos of Chinese Materia Medica in 2D paper. After that, the technological breakthrough of 2D digital camera and 2D camcorder can lead the display and record Chinese Materia Medica in 2D digital pictures and 3D (2D image x time) movies respectively. The invention of 3D camera can take 3D photos to illustrate and record Chinese Materia Medica in 3D. (length x width x height). The technological breakthrough of 3D camcorder can take 3D videos, which can illustrate and record Chinese Materia Medica in 4D (length x width x height x time).

Four-dimensional (4D) illustration and record (length x width x height x time) for 38 Chinese Materia Medica were developed and captured by Sony HDR-TD30V Full HD 3D Handycam Camcorder. They were *Cinnamomum cassia*, *Saposhnikovia divaricata*, *Glycyrrhiza uralensis*, *Paeonia lactiflora*, *Atractylodes macrocephala*, *Aster tataricus*, *Poria cocos*, *Tussilago farfara*, *Bombyx Batryticatus*, *Citri Reticulatae Pericarpium*, *Ligusticum chuanxiong*, *Ziziphus jujube*, *Angelica sinensis*, *Codonopsis pilosula*, *Lycium barbarum*, *Dioscorea opposita*, *Astragalus membranaceus*, *Euryale ferox*, *Rehmannia glutinosa*, *Pseudostellaria heterophylla*, *Amygdalus Communis*, *Illicium verum*, *Morinda officinalis*, *Platycladus orientalis*, *Pinellia ternata*, *Zanthoxylum bungeanum*, *Eucommia ulmoides*, *Stomatella lutea*, *Lancer japonica*, *Alumen*, *Ophiopogon japonicus*, *Commiphora molmol*, *Rosa rugosa*, *Cinnamomum cassia*, *Cnidium monnieri*, *Zingiber officinale*, *Prunus mume*. Youtube ([www.youtube.com](http://www.youtube.com)) was used to display their 4D illustrations.

**Content and Equipments**

Sony HDR-TD30V Full HD 3D Handycam Camcorder was the prominent equipment to capture and record the 4D illustrations. It was set at all the settings AUTO. A ruler was used to demonstrate the sizes of Chinese Materia Medica. Four-dimensional (4D) illustration and record (length x width x height x time) for 38 Chinese Materia Medica were captured and recorded. Their illustrations were published at Youtube ([www.youtube.com](http://www.youtube.com)).

**Results**

Four-dimensional illustration for *Cinnamomum cassia* is published at [https://www.youtube.com/watch?v=S\\_nY1ECQIb4](https://www.youtube.com/watch?v=S_nY1ECQIb4) .

Four-dimensional illustration for *Saposhnikovia divaricata* is published at <https://www.youtube.com/watch?v=Vr4TUpNFKaU> .

Four-dimensional illustration for *Glycyrrhiza uralensis* is published at <https://www.youtube.com/watch?v=bIVDmMkH88g> .

Four-dimensional illustration for *Paeonia lactiflora* is published at <https://www.youtube.com/watch?v=hXisXa83pXQ> .

Four-dimensional illustration for *Atractylodes macrocephala* is published at <https://www.youtube.com/watch?v=QdFGTyV1pBQ> .

Four-dimensional illustration for *Aster tataricus* is published at <https://www.youtube.com/watch?v=O24J0lhYiF0> .

Four-dimensional illustration for *Poria cocos* is published at <https://www.youtube.com/watch?v=uh-ethwUwMw> .

Four-dimensional illustration for *Tussilago farfara* is published at <https://www.youtube.com/watch?v=88g56puP5t0> .

Four-dimensional illustration for *Bombyx Batryticatus* is published at <https://www.youtube.com/watch?v=560gH6l3KFI> .

Four-dimensional illustration for *Citri Reticulatae Pericarpium* is published at <https://www.youtube.com/watch?v=fDM4cdehcmU>

Four-dimensional illustration for *Ligusticum chuanxiong* is published at <https://www.youtube.com/watch?v=kkIvde08Ib4> .

Four-dimensional illustration for *Ziziphus jujube* is published at <https://www.youtube.com/watch?v=pnWvJbp5oVM> .

Four-dimensional illustration for *Angelica sinensis* is published at <https://www.youtube.com/watch?v=GzOCcwOTiVtk> .

Four-dimensional illustration for *Codonopsis pilosula* is published at <https://www.youtube.com/watch?v=bJwdfac4pyo> .

Four-dimensional illustration for *Lycium barbarum* is published at [https://www.youtube.com/watch?v=xfN1x5Ew\\_HA](https://www.youtube.com/watch?v=xfN1x5Ew_HA) .

Four-dimensional illustration for *Dioscorea opposita* is published at <https://www.youtube.com/watch?v=RGLQajuu8Zg> .

Four-dimensional illustration for *Astragalus membranaceus* is published at <https://www.youtube.com/watch?v=dqW30Gddjss> .

Four-dimensional illustration for *Euryale ferox* is published at [https://www.youtube.com/watch?v=swMUjF7Q\\_C0](https://www.youtube.com/watch?v=swMUjF7Q_C0) .

Four-dimensional illustration for *Rehmannia glutinosa* is published at <https://www.youtube.com/watch?v=acYtXYMwUi8> .

Four-dimensional illustration for *Pseudostellaria heterophylla* is published at <https://www.youtube.com/watch?v=G7v5mzTOoZE> .

Four-dimensional illustration for *Amygdalus Communis* is published at <https://www.youtube.com/watch?v=I984Qu8W9uU> .

Four-dimensional illustration for *Illicium verum* is published at <https://www.youtube.com/watch?v=8rGmTPfa2-k> .

Four-dimensional illustration for *Morinda officinalis* is published at <https://www.youtube.com/watch?v=PI9JRggvMXw> .

Four-dimensional illustration for *Platyclusus orientalis* is published at <https://www.youtube.com/watch?v=hYhmug81PGc> .

Four-dimensional illustration for *Pinellia ternata* is published at <https://www.youtube.com/watch?v=M23s8-Rfczs> .

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Four-dimensional illustration for *Zanthoxylum bungeanum* is published at <https://www.youtube.com/watch?v=slsjlc881Gs> .

Four-dimensional illustration for *Eucommia ulmoides* is published at <https://www.youtube.com/watch?v=-bTTPkYOefM> .

Four-dimensional illustration for *Stomatella lutea* is published at <https://www.youtube.com/watch?v=CgB6CSy7lMg> .

Four-dimensional illustration for *Lancer japonica* is published at [https://www.youtube.com/watch?v=\\_zqIMCqPzA8](https://www.youtube.com/watch?v=_zqIMCqPzA8) .

Four-dimensional illustration for Alumen is published at <https://www.youtube.com/watch?v=X3spHv2SE8w> .

Four-dimensional illustration for *Ophiopogon japonicus* is published at

<https://www.youtube.com/watch?v=bLIAELdLLXs> .

Four-dimensional illustration for *Commiphora molmol* is published at <https://www.youtube.com/watch?v=eIOhDu161LA> .

Four-dimensional illustration for *Rosa rugosa* is published at <https://www.youtube.com/watch?v=SrX7V1eUr8e> .

Four-dimensional illustration for *Cinnamomum cassia* is published at <https://www.youtube.com/watch?v=ReYz7yX6PhY> .

Four-dimensional illustration for *Cnidium monnieri* is published at [https://www.youtube.com/watch?v=-KZ9Bkn\\_ffg](https://www.youtube.com/watch?v=-KZ9Bkn_ffg) .

Four-dimensional illustration for *Zingiber officinale* is published at <https://www.youtube.com/watch?v=3G7wohJ4NTM> .

Four-dimensional illustration for *Prunus mume* is published at <https://www.youtube.com/watch?v=IJHwBnmffNM> .

**Discussions**

Four-dimensional (4D) illustration and record was used to record a more comprehensive and thorough forms of Chinese Materia Medica, which can help illustrate, distinguish and validate Chinese Materia Medica.