of the silica mold by nitrogen adsorption analysis, is 3.3 nm or more and 11.2 nm or less;

wherein a carbon wall content is 61.5 ml/g or more and 168.4 ml/g or less, the carbon wall content representing a volume of the carbon wall per gram of the carbon support;

wherein a carbon support ratio calculated by 3D-TEM observation is 46% or more and 57% or less, the carbon support ratio representing a proportion of the carbon support that is occupied by carbon;

wherein the carbon support includes at least one throat in the at least one pore; and

wherein an average diameter of the at least one throat, which is calculated by 3D-TEM observation, is 1.9 nm or more and 2.0 nm or less, the average diameter of the at least one throat being smaller than a diameter of the at least one pore.

[0010]

In one example, a carbon support ratio calculated by 3D-TEM observation may be more than 36% and less than 67%.

[0011]

In another example, the carbon support may include at least one throat in the pore, and an average diameter of the at least one throat of the pore, which is calculated by 3D-TEM observation, may be 1.9 nm or more and less than 2.5 nm.

[0012]

In another example, the carbon wall content may be 61.5 ml/g or more and 168.4 ml/g or less; the carbon support ratio may be 46% or more and 57% or less; and the average diameter of the at least one throat of the pore may be 1.9 nm or more and 2.0 nm or less.

[0013]

In another example, the catalyst for fuel cells according

to the present disclosure, is a catalyst for fuel cells, wherein the catalyst comprises a carbon support supporting a metal catalyst, and wherein the carbon support is the above-described carbon support.

[0014]

In another example, the catalyst layer for fuel cells according to the present disclosure, is a catalyst layer for fuel cells, wherein the catalyst layer comprises the above-described catalyst for fuel cells.

[0015]

In another example, the carbon support production method of the present disclosure is a method for producing the above-described carbon support, wherein a silica including at least one pore is produced

CLAIMS

1. A carbon support for catalysts for fuel cells,

wherein the carbon support includes at least one pore;

wherein a thickness of a carbon wall of the carbon support, which is derived from a three-dimensional pore structure of a silica mold obtained by pore volume measurement of the silica mold by nitrogen adsorption analysis, is 3.3 nm or more and 11.2 nm or less;

wherein a carbon wall content is 61.5 ml/g or more and 168.4 ml/g or less, the carbon wall content representing a volume of the carbon wall per gram of the carbon support;

wherein a carbon support ratio calculated by 3D-TEM observation is 46% or more and 57% or less, the carbon support ratio representing a proportion of the carbon support that is occupied by carbon;

wherein the carbon support includes at least one throat in the at least one pore; and

wherein an average diameter of the at least one throat, which is calculated by 3D-TEM observation, is 1.9 nm or more and 2.0 nm or less, the average diameter of the at least one throat being smaller than a diameter of the at least one pore.

2. A catalyst for fuel cells,

wherein the catalyst comprises a carbon support supporting a metal catalyst, and

wherein the carbon support is the carbon support defined by Claim 1.

3. A catalyst layer for fuel cells, wherein the catalyst layer comprises the catalyst for fuel cells defined by Claim 2.

4. A method for producing the carbon support defined by Claim

1, wherein a silica including at least one pore is produced as a mold.