

Composer: Simple TEM Tutorial

Adding a type

1: Select “Administration”

Materials Data Curation System

Welcome, admin. Thanks for logging in.

Logout | My Profile | Help

Home | Data Curation | Data Exploration | Composer

Materials Data Curator

This system allows for the curation of Material Data in a repository using predefined templates.

This is being developed at the National Institute of Standards and Technology and is made available to solicit comments from the Material Science community. Please do not enter any proprietary data into this system.

Available Options [All Options »](#)

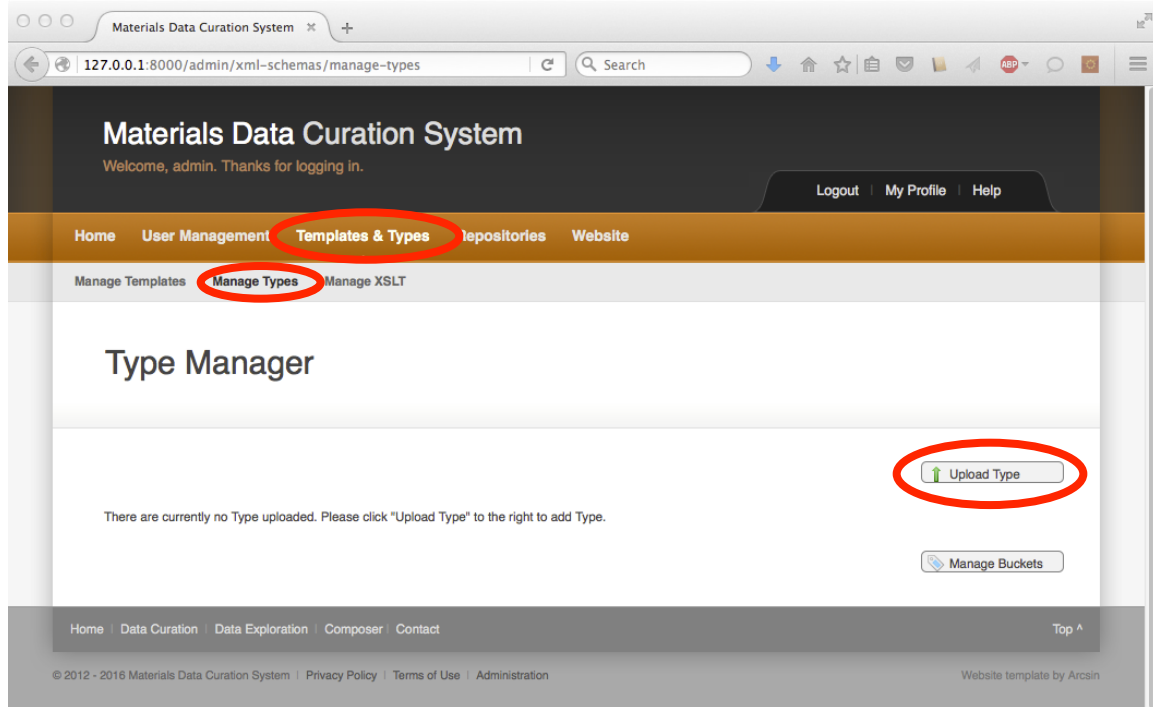
- [Curate your Materials Data](#)
Click here to select a form template and then fill out the corresponding form.
- [Explore the repository](#)
Click here to search for Materials Data in the repository using flexible queries.
- [Compose a template](#)
Click here to compose your own template.

Most Recent Templates [Browse All »](#)

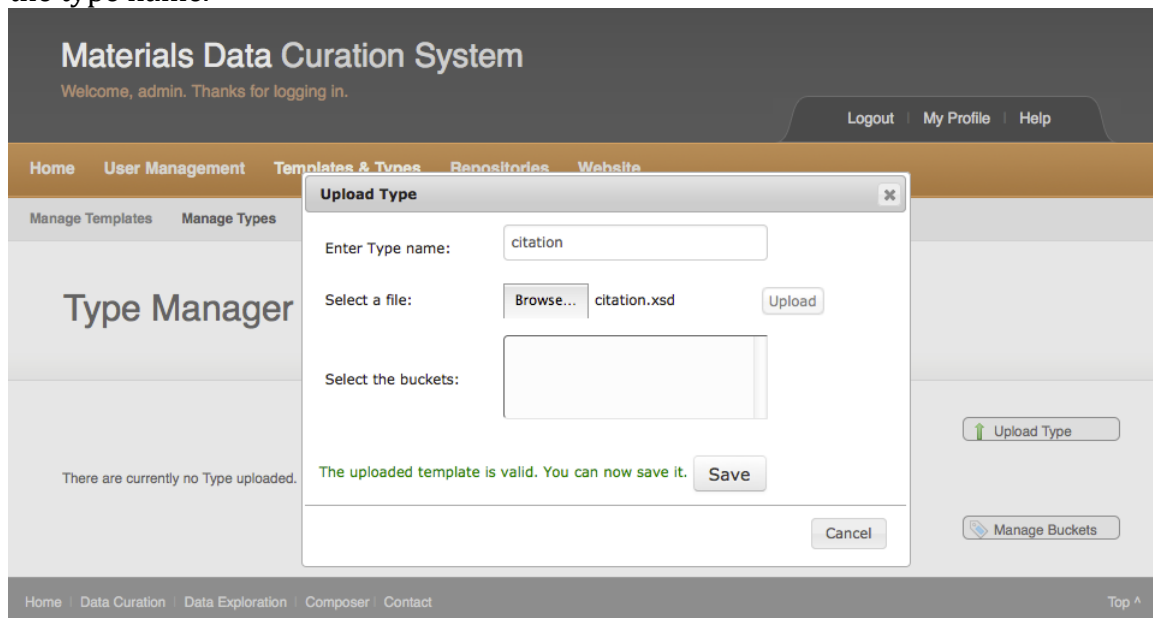
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2: Select “Templates & Types”, select “Manage Types”, and select “Upload Type”



3: Navigate to the TEM Tutorial folder and select “citation.xsd”. Enter “citation” as the type name.



4. Click on “Home”

Materials Data Curation System

Welcome, admin. Thanks for logging in.

Logout | My Profile | Help

Home | User Management | Templates & Types | Repositories | Website

Manage Templates | Manage Types | Manage XSLT

Type Manager

Upload Type

Type name	Filename	Buckets	Status	Actions
note	note.xsd		Registered	Versions Edit Delete

Manage Buckets

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Modifying an existing Template

1: Click on “Composer”

Materials Data Curation System

Welcome, admin. Thanks for logging in.

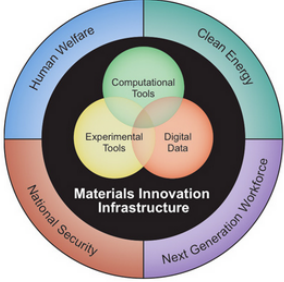
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This system allows for the curation of Material Data in a repository using predefined templates.

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The diagram illustrates the Materials Innovation Infrastructure. It features a central circle labeled "Materials Innovation Infrastructure" surrounded by four overlapping circles: "Computational Tools" (green), "Experimental Tools" (yellow), "Digital Data" (orange), and "Next Generation Workforce" (purple). These are further enclosed by a ring divided into four segments: "Human Welfare" (blue), "Clean Energy" (teal), "National Security" (red), and "Next Generation Workforce" (purple).

Available Options [All Options »](#)

-  **[Curate your Materials Data](#)**
Click here to select a form template and then fill out the corresponding form.
-  **[Explore the repository](#)**
Click here to search for Materials Data in the repository using flexible queries.
-  **[Compose a template](#)**
Click here to compose your own template.

Most Recent Templates [Browse All »](#)

TEM-Tutorial | workshop-TEM.xsd

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2: Select “TEM-Tutorial” as current template. Proceed to second step: “Compose Template”

The screenshot shows the Materials Data Curation System interface. The browser address bar displays `127.0.0.1:8000/compose/`. The page title is "Materials Data Curation System" with a welcome message for "admin". The navigation bar includes "Home", "Data Curation", "Data Exploration", and "Composer". The "Composer" section has two tabs: "Start Template" and "Compose Template". The "Compose Template" tab is active, and the "Compose Template" step in the sidebar is circled in red. The main content area is titled "Start Template" and contains a message: "Select a new or existing start template from the following table to start composing. Once you make your selection, click on 'Compose Template' to proceed. It will automatically load the appropriate template and display it on the next page." Below this is a warning message: "No template selected. Select one in the table below." The "Global Templates" table is shown with the following data:

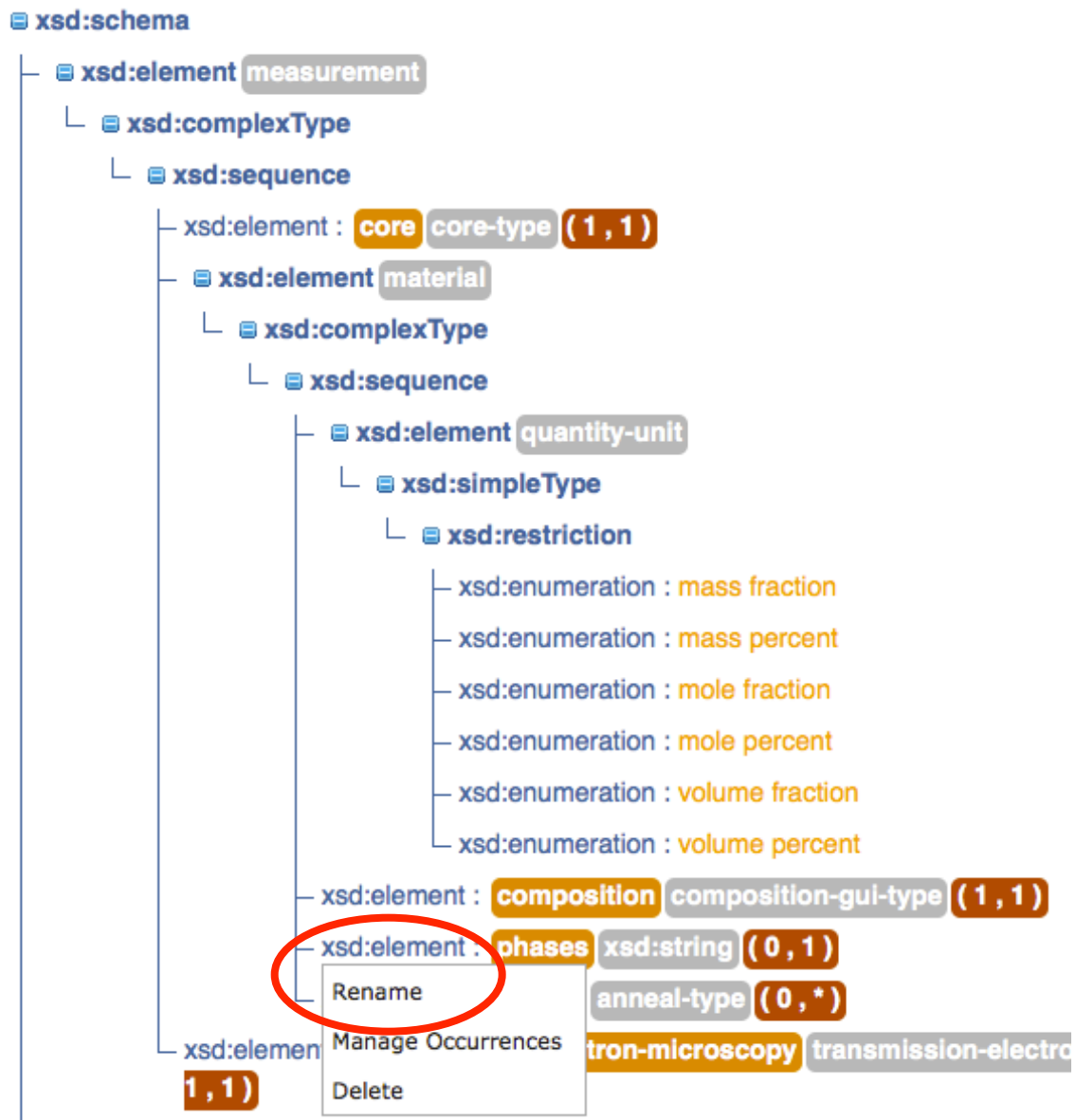
Template name	File name	Actions
New Base Template	new_base_template.xsd	Select as start template
TEM-Tutorial	workshop-TEM.xsd	Set as current template

The "Set as current template" button for the "TEM-Tutorial" row is circled in red. Below the table is the "User Defined Templates" section, which includes a link to the "Composer" and a note about creating templates.

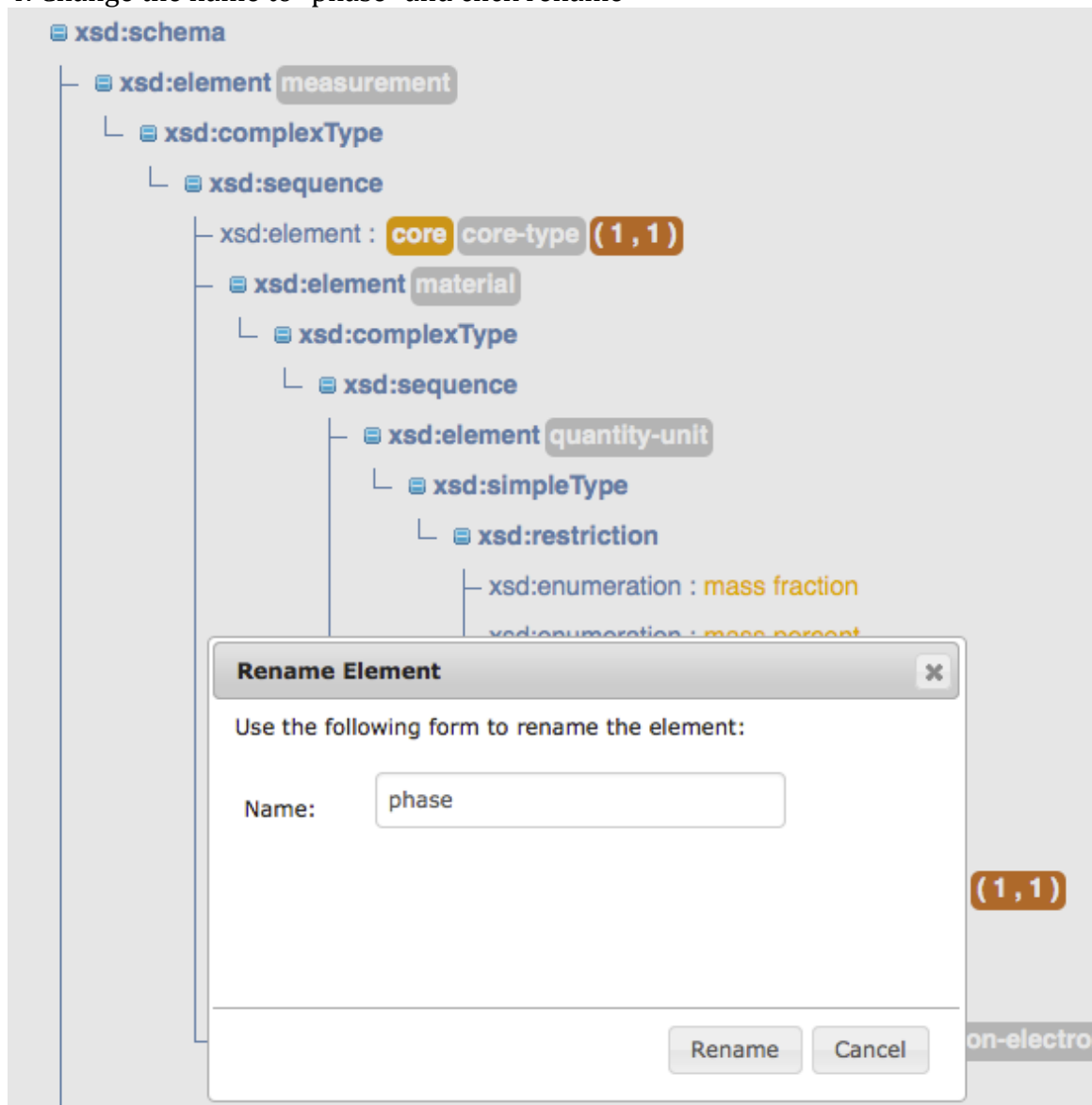
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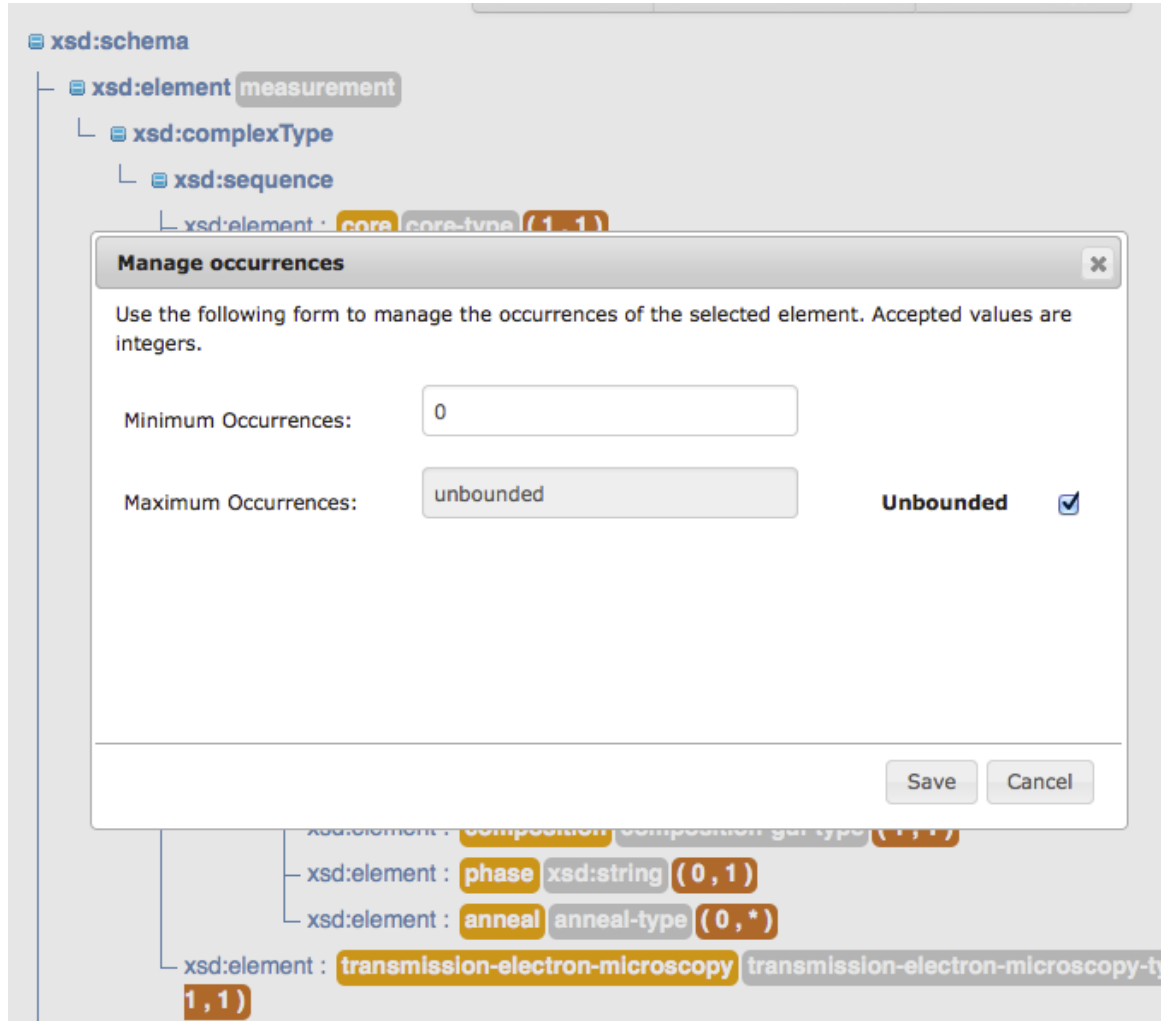
3: Click on “xsd:element” next to “phases” and select “rename”



4: Change the name to “phase” and click rename



5: Click on “xsd:element” next to “phase” and select “Manage Occurances”. Check the box for “Unbounded” and click “Save”



6: Click on the top-level xsd:sequence and select “Add Element”

Materials Data Curation System

127.0.0.1:8000/compose/build-template

Select Template

Compose Template

Legend

- Name
- Type
- (minOccurs, maxOccurs)

Please click on an element of the tree to start composing the template. A menu will appear and you will be able to interact with that element.

Download Save as Template Save as Type

xsd:schema

- xsd:element measurement**
 - xsd:complexType**
 - xsd:sequence**
 - Add Element
 - Change Type
 - xsd:complexType**
 - xsd:sequence**
 - xsd:element quantity-unit**
 - xsd:simpleType**
 - xsd:restriction**
 - xsd:enumeration : mass fraction
 - xsd:enumeration : mass percent
 - xsd:enumeration : mole fraction
 - xsd:enumeration : mole percent
 - xsd:enumeration : volume fraction
 - xsd:enumeration : volume percent
 - xsd:element : **composition** composition-gui-type (1,1)
 - xsd:element : **phase** xsd:string (0,*)
 - xsd:element : **anneal** anneal-type (0,*)
 - xsd:element : **transmission-electron-microscopy** transmission-electron-microscopy-type (1,1)
 - xsd:simpleType chemical-element-type**
 - xsd:restriction**
 - xsd:enumeration : Ac
 - xsd:enumeration : Al
 - xsd:enumeration : Ag
 - xsd:enumeration : Am
 - xsd:enumeration : Ar
 - xsd:enumeration : As

7: Drop-down “No Buckets” menu and insert “citation”

Materials Data Curation System

127.0.0.1:8000/compose/build-template

Search

1 Select Template

2 Compose Template

Legend

- Name
- Type
- (minOccurs, maxOccurs)

Please click on an element of the tree to start composing the template. A menu will appear and you will be able to interact with that element.

Download Save as Template Save as Type

xsd:schema

- xsd:element measurement
 - xsd:complexType
 - xsd:sequence

Insert an Element

Please select the type of the element that you want to insert in the template.

No Buckets

citation	citation.xsd	Insert
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My Types

Cancel

xsd:element : anneal anneal-type (0,*)

xsd:element : transmission-electron-microscopy transmission-electron-microscopy-type (1,1)

xsd:simpleType chemical-element-type

- xsd:restriction
 - xsd:enumeration : Ac
 - xsd:enumeration : Al
 - xsd:enumeration : Ag
 - xsd:enumeration : Am
 - xsd:enumeration : Ar
 - xsd:enumeration : As

The screenshot shows the 'Materials Data Curation System' interface. The browser address bar displays '127.0.0.1:8000/compose/build-template'. The page title is 'Compose Template'. Below the title, there is a instruction: 'Please click on an element of the tree to start composing the template. A menu will appear and you will be able to interact with that element.' To the right of this instruction are three buttons: 'Download', 'Save as Template', and 'Save as Type'.

On the left side, there is a 'Composer' section with two buttons: '1 Select Template' and '2 Compose Template'. Below this is a 'Legend' section with three items: 'Name' (orange box), 'Type' (grey box), and '(minOccurs, maxOccurs)' (orange box).

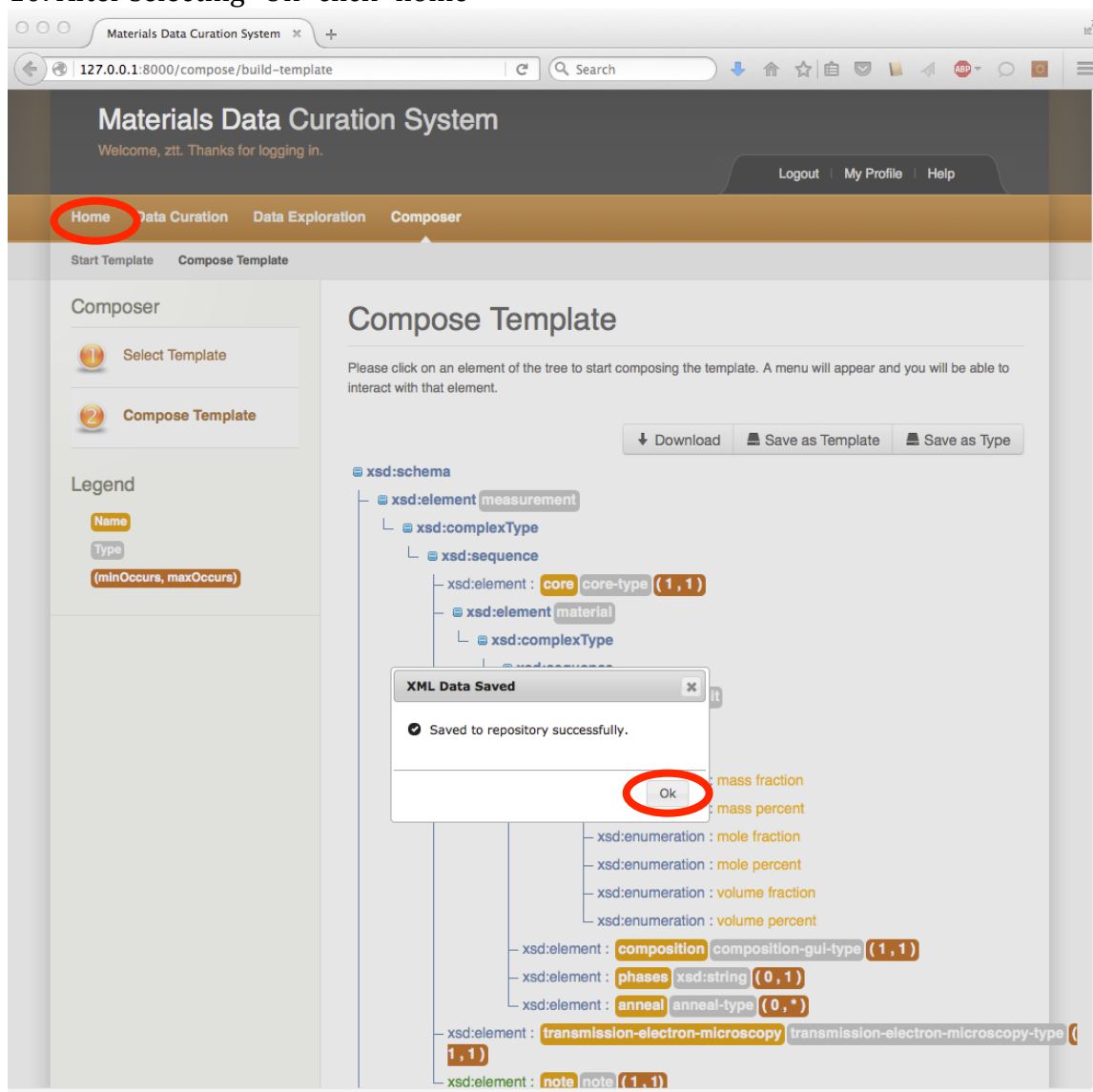
The main area displays a tree structure of XSD elements. The tree starts with 'xsd:schema', which contains 'xsd:element measurement'. 'xsd:element measurement' contains 'xsd:complexType', which contains 'xsd:sequence'. 'xsd:sequence' contains several 'xsd:element' nodes: 'core core-type (1,1)', 'material', 'transmission-electron-microscopy transmission-electron-microscopy-type (1,1)', and 'citation citation (1,1)'. The 'citation citation (1,1)' node is highlighted with a red circle. The 'material' node contains 'xsd:complexType', which contains 'xsd:sequence'. This 'xsd:sequence' contains 'xsd:element quantity-unit', 'composition composition-gui-type (1,1)', 'phase xsd:string (0,*)', and 'anneal anneal-type (0,*)'. The 'quantity-unit' node contains 'xsd:simpleType', which contains 'xsd:restriction'. This 'xsd:restriction' contains several 'xsd:enumeration' nodes: 'mass fraction', 'mass percent', 'mole fraction', 'mole percent', 'volume fraction', and 'volume percent'.

At the bottom of the tree, there is a 'xsd:simpleType chemical-element-type' node, which contains 'xsd:restriction'. This 'xsd:restriction' contains several 'xsd:enumeration' nodes: 'Ac', 'Al', 'Ag', and 'Am'.

9: Scroll to the top and click “Save as Template”. Enter “TEM citation” and click “save”.

The screenshot shows the 'Materials Data Curation System' interface. The top navigation bar includes 'Home', 'Data Curation', 'Data Exploration', and 'Composer'. The 'Composer' section is active, showing 'Start Template' and 'Compose Template' tabs. The 'Compose Template' tab is selected, displaying a tree structure of XSD elements. The tree starts with 'xsd:schema', which contains 'xsd:element measurement'. This element has a 'xsd:complexType' child, which in turn has a 'xsd:sequence' child. The 'xsd:sequence' contains several 'xsd:element' children: 'core' (core-type (1,1)), 'material' (xsd:complexType), 'composition' (composition-gui-type (1,1)), 'phase' (xsd:string (0,*)), 'anneal' (anneal-type (0,*)), and 'transmission-electron-microscopy' (transmission-electron-microscopy-type (1,1)). The 'material' element has a 'xsd:complexType' child, which has a 'xsd:sequence' child. This 'xsd:sequence' contains a 'xsd:element quantity-unit', which has a 'xsd:simpleType' child. The 'xsd:simpleType' has a 'xsd:restriction' child, which lists several 'xsd:enumeration' values: 'mass fraction', 'mass percent', 'mole fraction', 'mole percent', 'volume fraction', and 'volume percent'. In the top right corner of the main content area, there are three buttons: 'Download', 'Save as Template' (highlighted with a red circle), and 'Save as Type'.

10: After selecting “Ok” click “home”



11: Click on “Data Curation” and set “TEM citation” as the current template

The screenshot shows the Materials Data Curation System interface. The browser address bar displays '127.0.0.1:8000/curate/'. The main header includes the title 'Materials Data Curation System' and a welcome message 'Welcome, admin. Thanks for logging in.' with links for 'Logout', 'My Profile', and 'Help'. The navigation bar features 'Home', 'Data Curation' (highlighted with a red circle), 'Data Exploration', and 'Composer'. Below the navigation bar, the 'Data Curation' section is active, showing a sidebar with 'Select Template' (highlighted with a red circle), 'Enter Data', and 'View Data'. The main content area is titled 'Select Template' and contains instructions: 'Select a template from the following table. Once you make your selection, start a new document or open an existing form or start from an uploaded document. It will automatically load the appropriate form and display it on the next page.' The 'Global Templates' section lists two templates: 'DiffusionDemo' (file: mod.demo.diffusion.xsd) and 'TEM-Tutorial' (file: workshop-TEM.xsd), each with a 'Set as current template' button. The 'User Defined Templates' section lists one template: 'TEM citation', with a 'Set as current template' button (highlighted with a red circle). The footer includes a navigation bar with 'Home', 'Data Curation', 'Data Exploration', 'Composer', and 'Contact', along with a 'Top' link. The footer also contains copyright information: '© 2012 - 2016 Materials Data Curation System | Privacy Policy | Terms of Use | Administration' and 'Website template by Arcsin'.

Materials Data Curation System

Welcome, admin. Thanks for logging in.

Logout | My Profile | Help

Home | **Data Curation** | Data Exploration | Composer

Select Template | Enter Data | View Data

Data Curation

1 Select Template

2 Enter Data

3 View Data

Select Template

Select a template from the following table. Once you make your selection, start a new document or open an existing form or start from an uploaded document. It will automatically load the appropriate form and display it on the next page.

Global Templates

Template name	File name	Actions
DiffusionDemo	mod.demo.diffusion.xsd	Set as current template
TEM-Tutorial	workshop-TEM.xsd	Set as current template

User Defined Templates

Template name	Actions
TEM citation	Set as current template

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12: Select “Create a new document”. Enter “test-interface” and click “Start”. Verify changes to the template.

The screenshot shows a web browser window with the address bar displaying "127.0.0.1:8000/curate/enter-data". The page title is "Materials Data Curation System". The interface includes a search bar and navigation icons. The main content area displays a form for creating a new document, organized into sections:

- measurement**
 - core**
 - material**
 - quantity-unit: mass fraction
 - composition**
 - Select Elements button
 - No element selected.
 - phase: (Fe,M,Cr)3SiAl12
 - phase: FCC
- anneal**
- transmission-electron-microscopy**
- citation**
 - document-type: journal
 - title
 - author
 - publication-name
 - publication-date
 - volume
 - issue
 - abstract
 - pages
 - DOI
 - URL
 - bibtex
 - text-bibliography

The footer contains navigation links: Home | Data Curation | Data Exploration | Composer | Contact. It also includes copyright information: © 2012 - 2016 Materials Data Curation System | Privacy Policy | Terms of Use | Administration, and a note: Website template by Arcsin.