

# R bookdown+: Authoring Articles, Mails, Guitar books, Chemical Molecular Formulae and Equations with R bookdown

Peng Zhao

**Abstract.** Everyone knows that `bookdown` is an excellent package for authoring books on programming languages. But it is only one side of the coin. It can do more than expected. Therefore I am developing `bookdown+`. `bookdown+` is an extension of `bookdown`. It helps you write academic journal articles, guitar books, chemical equations, mails, calendars, and diaries.

## 1 Introduction

`bookdown+`? Hmm... sounds like something related to the R(R Core Team, 2017) package `bookdown` (Xie, 2016)?

Yes, you *R* right. Everyone knows that `bookdown` is an excellent package for authoring books on programming languages. But it is only one side of the coin. It can do more than expected. `bookdown` smells like a tasty cake. I have been expecting someone to cut it. Now I am helping myself. Therefore I am developing `bookdown+`.

`bookdown+` is an extension of `bookdown`. It is a collection of multiple templates, which I collected years ago on the basis of L<sup>A</sup>T<sub>E</sub>X, and have been tailoring them so that I can work happily under the umbrella of `bookdown`. `bookdown+` shows you the other side of the coin, which helps you write academic journal articles, guitar books, chemical equations, mails, calendars, and diaries.

I believe some official `bookdown` templates will be available in the near future, but I cannot wait. Can you?

With `bookdown+` you can

- record guitar chords,
- write a mail in an elegant layout,
- write a laboratory journal, or a personal diary,
- draw a monthly or weekly or conference calendar,

- and, of course, write academic articles in your favourite way,
- with chemical molecular formulae and equations,
- even in Chinese,
- and more wonders will come soon.

`bookdown+` is developed on the basis of the following outstanding work:

- R `bookdown` package (Xie, 2016)
- Two minimal book examples using `bookdown` by Yihui Xie<sup>1 2</sup>
- `gchords`, a L<sup>A</sup>T<sub>E</sub>X package for typesetting guitar chord diagrams by Kasper Peeters<sup>3</sup>
- Copernicus Publications L<sup>A</sup>T<sub>E</sub>X Package<sup>4</sup>

If I miss something that I should cite, please let me know.

## 2 Quick start

### 2.1 Step 0. Preparation

Before starting, you have to install R, RStudio, `bookdown` package, and other software and packages (i.e. Pandoc, L<sup>A</sup>T<sub>E</sub>X, `rmarkdown`, `rticle`, `knitr`, etc.) which `bookdown` depends on. See the official manual of `bookdown`<sup>5</sup> for details.

<sup>1</sup><https://github.com/yihui/bookdown-minimal>

<sup>2</sup><https://github.com/rstudio/bookdown-demo>

<sup>3</sup><http://kasper.phi-sci.com/gchords/>

<sup>4</sup>[http://publications.copernicus.org/for\\_authors/latex\\_instructions.html](http://publications.copernicus.org/for_authors/latex_instructions.html)

<sup>5</sup><https://bookdown.org/yihui/bookdown/>

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摘要:

R bookdown 能做的事情很多, 可是那些功能迟迟不来, 我只好自己动手, 写了个 bookdown+, 目前大体实现了用 bookdown 写期刊论文、化学分子式、信件、日记、日历等功能。当然, 有些还没完全实现, 革命不够彻底, 带着浓重的  $\text{\LaTeX}$  旧社会的气息。革命尚未成功, 同志仍需努力。

关键词: 很关键; 很关键; 非常关键

## R bookdown+: Authoring Articles, Mails, Guitar Chords, Chemical Molecular Formulae and Equations with R bookdown

Dapeng Zhao Xiaopeng Zhao

Institute of Ecology

University of Innsbruck, Austria

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## 1 背景 {intro}

bookdown+, 听起来像是跟 R(R Core Team, 2017) 的扩展包 bookdown(Xie, 2016) 有关吧?

一点没错! 我们知道, bookdown 天生是个用来写编程书籍的称手工具。只是, 这仅仅是硬币的一面。bookdown 的功能远远不止如此。它就像一个美味的蛋糕, 我等啊等啊, 等着谁把它切开, 实在等不及了, 就自己下手吧。所以, 我弄了个 bookdown+。

bookdown+ 是 bookdown 的扩展。我数年前收集了一些  $\text{\LaTeX}$  模板, 现在我把他们整理到 bookdown+ 里, 这样就可以开开心心在 bookdown 的环境里做喜欢的事情。bookdown+ 展示了硬币的另一面: 你可以用它来写写期刊论文、化学分子式、信件、日历、甚至日记。

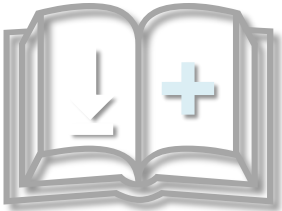
在不久的未来, 肯定会出现很多官方的 bookdown 模板, 但是我不想等了。你要是也等不及, 就跟我来一起使用或开发 [bookdown+] 吧!

## 2 快速入门 {quick}

### 2.1 预备 {step0}

在开始前, 你需要安装 R, RStudio, bookdown, 和其他依赖的软件和包 (例如 Pandoc,  $\text{\LaTeX}$ , rmarkdown, rticle, knitr 等)。详见 bookdown 官方手册。

准备好后, 从 Github 下载 bookdown+ 压缩文件。解压缩到你的电脑里, 在得到的文件夹里找到 \_start.Rproj 文件, 双击就会在 RStudio 里打开一个项目。



R bookdown+

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# JULY 2017

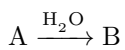
SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		<i>Work</i> <span style="float: right;">1</span> 10am Meeting with Boss 12pm Meeting with Group	<span style="float: right;">2</span>	<span style="float: right;">3</span>	<i>In Transit</i> <span style="float: right;">4</span> <b>Depart</b> (PHL) @ 18:10 EDT US Airways # 740 US Airways record locator: EPYTWQ Airline ticket number(s): 0377186181588-589	<i>Madrid</i> <span style="float: right;">5</span> <b>Arrive</b> (MAD) @ 07:45 CEST <hr/> Hotel Senator Gran Vía Calle Gran Vía, 21 28013 (Centro) MADRID +34 915 31 41 51 Reservation code: 080131-98638 <u>Cancellation code: 9860291</u> Palacio Real Plaza Mayor Reina Sofia National Museum
<i>Toledo (Day Trip)</i> <span style="float: right;">6</span> Cathedral Sinagoga del Transito Palace Alcazar Sinagoga del Santa Maria la Blanca	<i>Madrid</i> <span style="float: right;">7</span> Real Academic de Bellas Artes Templo de Debod <u>Museo del Prado</u> <b>Depart</b> Madrid @ 22:45 on SNCF 332	<i>Lisbon</i> <span style="float: right;">8</span> <u><b>Arrive</b> in Lisbon @ 08:00</u> Hotel Real Palácio Rua Tomás Ribeiro 115  Elevador de Santa Justa Solar do Vinho do Porto Castelo de São Jorge Mosteiro do Geronimos Torre de Belém	<i>Estoril</i> <span style="float: right;">9</span> <u><b>Arrive</b> in Estoril</u> Hotel Alvorada Rua de Lisboa, 3 <u>OptMAS Workshop?</u>	<i>Estoril</i> <span style="float: right;">10</span> DCR Workshop	<i>Estoril</i> <span style="float: right;">11</span> FIPA Meeting 11:10–12:10 Poster Session w/ “Drinks and Snacks” 15:00–16:00	<i>Estoril</i> <span style="float: right;">12</span> AAMAS Demos Conference Banquet @ 18:30
<i>Estoril</i> <span style="float: right;">13</span> <b>Depart</b> (LIS) @ 10:35 WEST US Airways #739 <b>Arrive</b> (PHL) @ 13:25 EST	<span style="float: right;">14</span>	<span style="float: right;">15</span>	<span style="float: right;">16</span>	<span style="float: right;">17</span>	<span style="float: right;">18</span>	<span style="float: right;">19</span>
<span style="float: right;">20</span>	<span style="float: right;">21</span>	<span style="float: right;">22</span>	<span style="float: right;">23</span>	<span style="float: right;">24</span>	<span style="float: right;">25</span>	<span style="float: right;">26</span>
<span style="float: right;">27</span>	<span style="float: right;">28</span>	<span style="float: right;">29</span>	<span style="float: right;">30</span>	<span style="float: right;">31</span>		

$$A \leftarrow - > B$$

$$A \rightleftharpoons B$$

$$A \rightleftharpoons B$$

$$A \rightleftharpoons B$$



$$A \xrightarrow[\text{textbelow}]{\text{textabove}} B$$

$$A \xrightarrow[x_i]{x} B$$

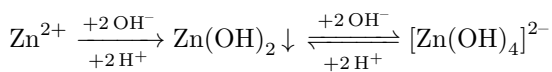
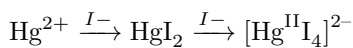
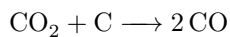
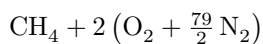
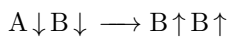
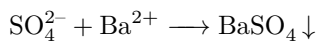
$$A \xrightarrow{x} B$$

$$A + B$$

$$A - B$$

$$A = B$$

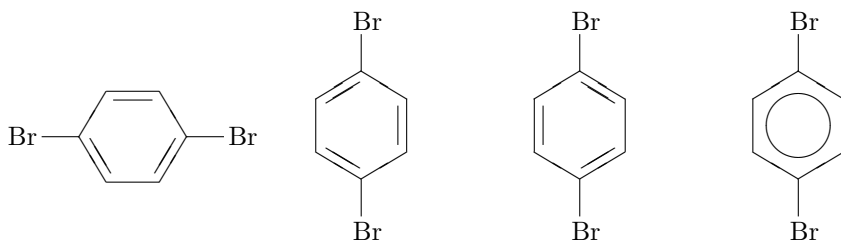
$$A \pm B$$



$$K = \frac{[\text{Hg}^{2+}][\text{Hg}]}{[\text{Hg}_2^{2+}]}$$

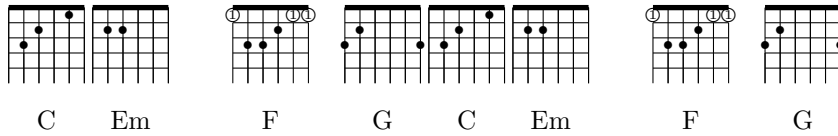
$$K = \frac{[Hg^{2+}][Hg]}{[Hg^{22+}]}$$

## 2.3 Structural formulae

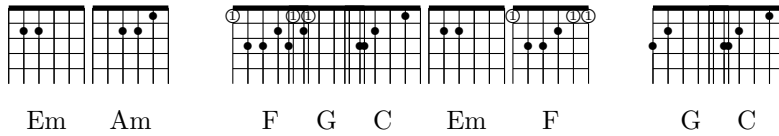


# 成都

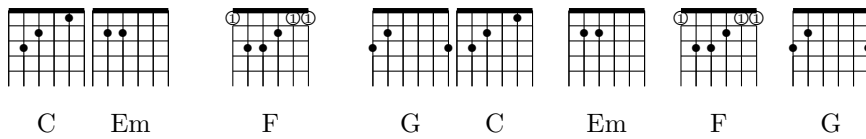
作词：赵雷，作曲：赵雷，编曲：赵雷、喜子。



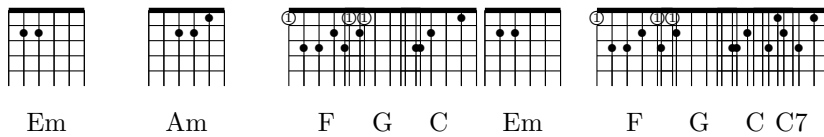
让我掉下眼泪的 不只昨夜 让我依依不舍的 不只你的温柔



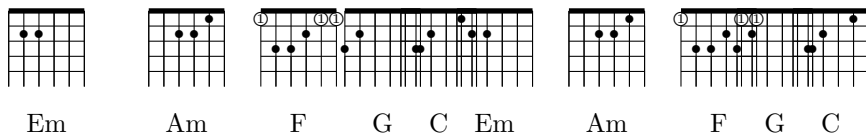
余路还要走多久 你攥着我的手 让我感到为难的 是挣扎的自由



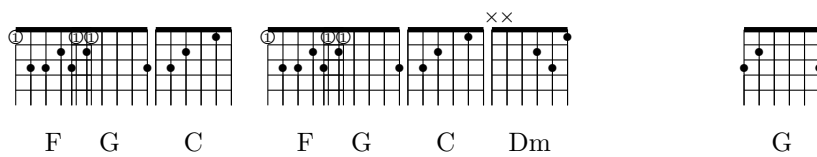
分别总是在九月 回忆是思念的愁 深秋嫩绿的垂柳 亲吻着我额头



在那座阴雨的小城里 我从未忘记你 成都 带不走的 只有你



和我在成都的街头走一走 呜哦呜哦直到所有的灯都熄灭了也不停留



你会挽着我的衣袖 我会把手揣进裤兜 走到玉林路的尽头 坐在 (走过) 小酒馆的门口

## WedneTuesday, 10 May, 2017

### 0.1 Step 0. Preparation

Before starting, you have to install R, RStudio, bookdown package, and other software and packages (i.e. Pandoc,  $\text{\LaTeX}$ , rmarkdown, rticle, knitr, etc.) which bookdown depends on. See the official manual of bookdown <sup>5</sup> for details.

If you are ready, [download bookdown+](#) package as a zip file from Github. Unzip it to a folder in your PC. You will find a file named `_start.Rproj`. Double click it, and it will be opened by RStudio.

OK, now you can see a `_runme.R` file as well. Open it and run the script, or follow my explanation as follows,

### 0.2 Step 1. Title and author

Specify the title and the author of your book, article, guitar book, or whatever.

### 0.3 Step 2: Template

Choose a template out of the available templates. Here I choose the 8th.

Run `fun/build.R`.

### 0.4 Step 3: Write and Build

Now you can press `ctrl+shift+b` to build a demo book, which you can find in `book/`.

Write your own text in `body.Rmd`, and build your own lovely book.

Have fun!

<sup>5</sup><https://bookdown.org/yihui/bookdown/>

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CAMS

Zhongguancunnandajie 46  
100000 Beijing, China

May 12, 2017

*Dear Sir or Madam:*

*Lorem ipsum dolor sit amet, consectetur adipiscing elit. Sed nec sem sit amet lacus aliquam blandit. Nunc tristique mollis eros. Praesent elit. Maecenas turpis. Vestibulum consectetur velit sit amet ipsum. Aliquam pede nunc, dictum ac, dictum nec, bibendum ut, ante. Phasellus justo urna, convallis vitae, scelerisque a, egestas vitae, diam. Cras eu enim a eros tristique varius.*

*Pellentesque pellentesque magna a arcu. Phasellus enim purus, pellentesque sed, interdum hendrerit, interdum elementum, sapien. Nunc lobortis neque sed elit congue tempus. Vestibulum ante ipsum primis in faucibus orci luctus et ultrices posuere cubilia Curae; Nam lacus mi, volutpat bibendum, ullamcorper in, imperdiet vel, purus. Aliquam egestas sollicitudin mauris. Maecenas quis massa euismod tortor interdum consectetur. Mauris rutrum leo adipiscing erat.*



*Alfred, Lord Tennyson*

*Break, Break, Break*

**B**reak, break, break,  
on thy cold gray stones, O Sea!

And I would that my tongue could utter  
The thoughts that arise in me.

O, well for the fisherman's boy,  
That he shouts with his sister at play!

O, well for the sailor lad,  
That he sings in his boat on the bay!

And the stately ships go on  
To their haven under the hill;

But O for the touch of a vanish'd hand,  
And the sound of a voice that is still!

Break, break, break  
At the foot of thy crags, O Sea!

## INTRODUCTION

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Yes, you *R* right. Everyone knows that bookdown is an excellent package for authoring books on programming languages. But it is only one side of the coin. It can do more than expected. bookdown smells like a tasty cake. I have been expecting someone to cut it. Now I am helping myself. Therefore I am developing bookdown+.

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<sup>3</sup> <http://kasper.phi-sci.com/gchords/>

<sup>4</sup> [http://publications.copernicus.org/for\\_authors/latex\\_instructions.html](http://publications.copernicus.org/for_authors/latex_instructions.html)

*You can put some additional information here*