

April 2023

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Dr. Lothar Nunnenmacher, Lib4RI



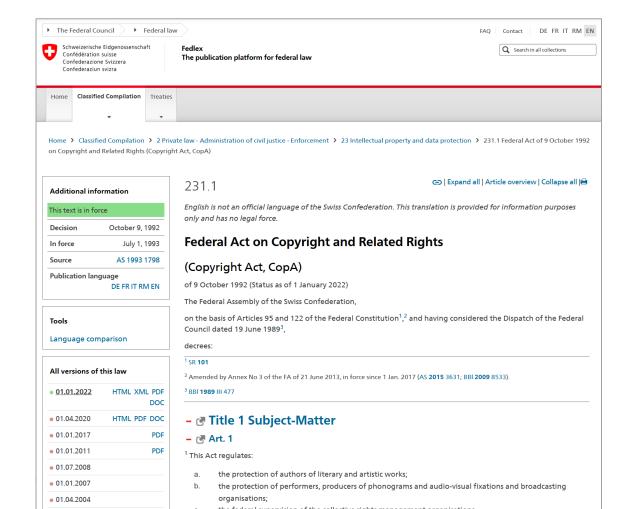




Copyright



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The Berne Convention, an international agreement governing copyright, was signed in 1886

- o slow uptake
- o several revisions
- o now: 180+ contractors





Chapter 1: Works

Art. 2 Definition of works

- Works are literary and artistic intellectual creations with an individual character, irrespective of their value or purpose.
- ² They include, in particular:
 - a. literary, scientific and other linguistic works;
 - b. musical works and other acoustic works;
 - c. works of art, in particular paintings, sculptures and graphic works;
 - d. works with scientific or technical content such as **drawings**, **plans**, **maps** or three-dimensional representations;
 - e. works of architecture;
 - f. works of applied art;
 - g. photographic, cinematographic and other visual or audiovisual works;
 - h. choreographic works and works of mime.
- 3 Computer programs are also works.
- ⁴ **Drafts, titles and parts of works**, insofar as they are intellectual creations with an individual character, are also protected.

<=> Patents

A patent gives its owner the right to exclude others from making, using, selling, and importing an invention for a limited period of time, usually twenty years.

(Wikipedia)



What do you think: Which of the following photographs is protected by Swiss copyright law?







Bob Marley

Photograph: Max Messerli

London, Towerbridge

Photograph: Lothar Nunnenmacher

Hug G, 2005: Bob Marley vs Christoph Meili: ein Schnappschuss. Sic-online 9(1): 078, https://www.sic-online.ch/fileadmin/user_upload/Sic-Online/2005/documents/057.pdf.

Since 1. April 2020: Photographic depictions and depictions of three-dimensional objects produced by a process similar to that of photography are considered works, even if they do not have individual character.

Christoph Meili

Photograph: Gisela Blau



Chapter 2: Author

Art. 6 Definition

The author is the natural person who has created the work.

Art. 7 Joint authorship

Where **two or more persons** have contributed as authors to the creation of a work, copyright belongs to all such persons jointly. (...)

US Copyright Law

(Exceptions)

105. Subject matter of copyright: United States Government works

Copyright protection under this title is not available for any work of the United States Government, (...)

201. Ownership of copyright

(b) In the case of a work made for hire, the employer or other person for whom the work was prepared is considered the author for purposes of this title, and, unless the parties have expressly agreed otherwise in a written instrument signed by them, owns all of the rights comprised in the copyright.



Chapter 3: Scope of Copyright

Art. 9 Recognition of authorship

- ¹ The author has the exclusive right to his own work and the right to recognition of his authorship.
- ² The author has the exclusive right to decide whether, when, how and under what author's designation his own work is **published** for the first time. (...)

Art. 10 Use of the work

¹ The author has the exclusive right to decide whether, when and how his work is **used**. (...)

Art. 11 Integrity of the work

- ¹ The author has the exclusive right to decide:
 - a. whether, when and how the work may be altered;
 - b. whether, when and how the work may be used to create a derivative work or may be included in a collected work.
- ² Even where a third party is authorised by contract or law to alter the work or to use it to create a derivative work, the author may oppose any distortion of the work that is a violation of his personal rights.
- ³ It is permissible to use existing works for the creation of parodies or other comparable variations on the work.



What do you think: How long is a work protected by Swiss copyright law?

- o 2 years
- o 20 years
- o 70 years
- o 70 years after the death of the creator
- o for unlimited time





Chapter 6: Term of Protection

Art. 29 In general

- ¹ A work is protected by copyright as soon as it is created, irrespective of whether it has been fixed on a physical medium.
- ² Protection expires:
 - a. in the case of computer programs, 50 years after the death of the author;
 - b. in the case of all other works, **70 years after the death of the** author.
- ³ Where it is has to be assumed that the author has been dead for more than 50 or 70 years respectively, protection no longer applies.

Afterwards



If unclear

Orphan works







Exceptions to Copyright



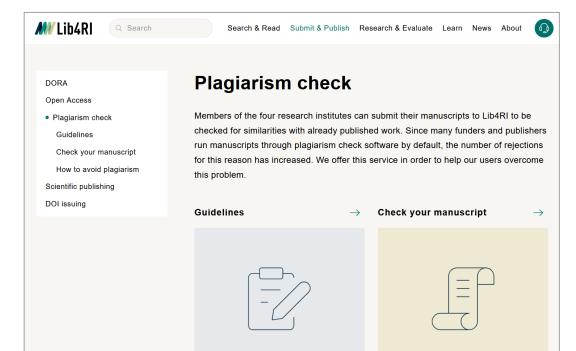
Chapter 5: Exceptions to Copyright

Art. 25 Quotations

- ¹ Published works **may be quoted** if the quotation serves as an explanation, a reference or an illustration, and the extent of the quotation is justified for such purpose.
- The quotation must be designated as such and the source given. Where the source indicates the name of the author, the name must also be cited.

Hot Topic: ChatGPT

See also: Our lecture series on Al tools & LLM.





Chapter 5: Exceptions to Copyright

Art. 19 Private use

- ¹ Published works may be used for private use. Private use means:
 - a. any personal use of a work or use within a circle of persons closely connected to each other, such as relatives or friends;
 - any use of a work by a teacher and his class for educational purposes;
 - c. the copying of a work in enterprises, public administrations, institutions, commissions and similar bodies for internal information or documentation.
- Persons entitled to make copies of a work for private use may also have them made by third parties subject to paragraph 3; libraries, other public institutions (...)
- The following are not permitted outside the private sphere defined in paragraph 1 letter a
 - a. the complete or substantial copying of a work obtainable commercially; (...)

US Copyright Law

Chapter 1: Subject Matter and Scope of Copyright

107. Limitations on exclusive rights: Fair use

(...) the fair use of a copyrighted work, (...) for purposes such as **criticism**, **comment**, **news reporting**, **teaching** (including multiple copies for classroom use), **scholarship**, **or research**, is not an infringement of copyright.

In determining whether the use made of a work in any particular case is a fair use the **factors** to be considered shall include

- (1) the **purpose and character of the use**, including whether such use is of a commercial nature or is for nonprofit educational purposes;
- (2) the nature of the copyrighted work;
- (3) the amount and substantiality of **the portion used** in relation to the copyrighted work as a whole; and
- (4) the **effect** of the use **upon the potential market** for or value of the copyrighted work.





According to Swiss copyright law, which of the following «works» are you allowed to share with a colleague?

- o a journal article, authored by yourself
- o any journal article
- o a book chapter
- o a complete book, commercially available
- o none of them





Chapter 5: Exceptions to Copyright

Art. 20 Remuneration for private use

- 2 (...) Any person who reproduces works in any manner for private use under Article 19 paragraph 1 letter b or letter c, (...) owes remuneration to the author.
- Claims for remuneration may only be asserted by the authorised collective rights management organisations.

Copyright collecting societies in Switzerland

- SUISA music
- Suissimage audio-visual works
- SSA (Société Suisse des Auteurs) dramatic works
 and audio-visual works
- ProLitteris literature, photographs and arts
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Chapter 5: Exceptions to Copyright

Art. 24d Use of works for the purposes of scientific research

- ¹ For the purposes of scientific research, it is permissible to reproduce a work if the copying is due to the use of a technical process and if the works to be copied can be lawfully accessed.
- ² On conclusion of the scientific research, the copies made in accordance with this article may be retained for archiving and backup purposes.
- ³ This article does not apply to the copying of computer programs.

More information to come:

Text & Data Mining

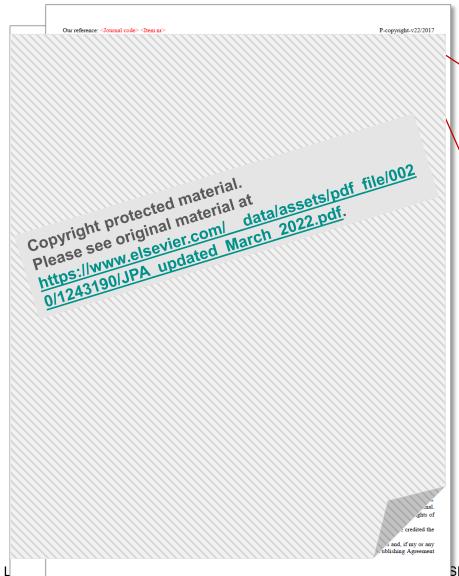




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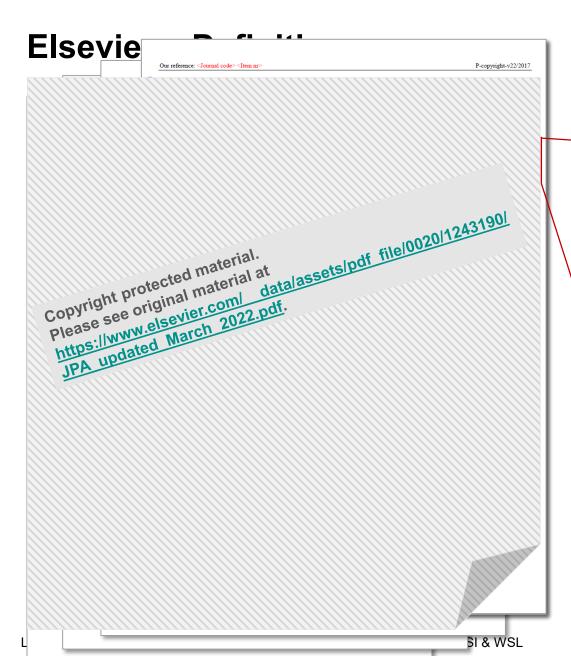
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(i)



Read it, change it and then sign it

- Modify critical topics in the copyright transfer agreement such as "exclusive" transfer of "all" rights.
 It doesn't have to be all or nothing.
- Alternatively, add an addendum that retains these rights
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 - Copyright Addendum Engine: https://labs.creativecommons.org/scholars/
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Re-use in a Scientific Context

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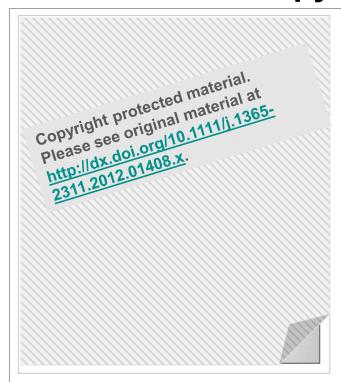


Figure 1

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Adult Chinese mantid (Tenodera sinensis) gutting a final-instar monarch (Danaus plexippus) caterpillar. For scale, mantid forelegs are ~3 cm in length. Photo credit: Alex Allaux.

Publish Open Access with the RE Ecological ☐ Full Access Chinese mantids gut toxic monarch caterpillars: avoidance of prey defence? IAMIE L. RAFTER, ANURAG A. AGRAWAL, EVAN L. PREISSER First published: 22 January 2013 | https://doi.org/10.1111/j.1365-2311.2012.01408.x | Cited by: 14 Lib4RI Services < SHARE **SECTIONS** Request permission Abstract Export citation 1. Monarch caterpillars, Danaus plexippus (Linna in the genus Asclepias and sequester cardenolides as a ever, some ☆ Add to favorites predators are able to consume this otherwise u 2. Chinese mantids, Tenodera sinensis (Saussure ionarch Track citation caterpillars by 'gutting' them (i.e. removing the ans). They then feed on the body of this herbivore without any apparent ill effects. 3. How adult T. sinensis handle and consume toxic (D. plexippus) and non-toxic [Ostrinia nubilalis (Hübner) and Galleria mellonella (Linnaeus)] caterpillars was explored. The

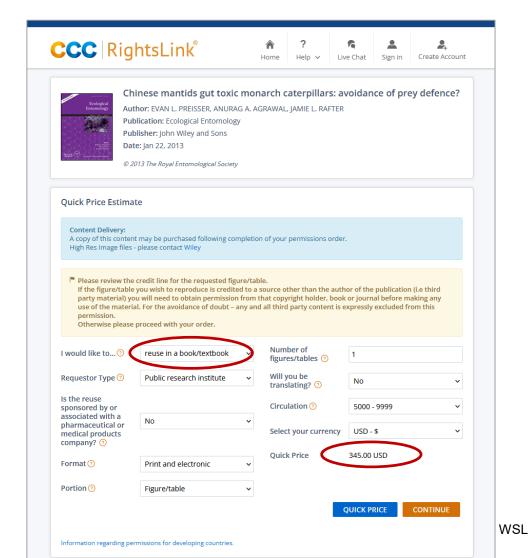
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Chinese mantids gut toxic monarch caterpillars: avoidance of prey defence?

Author: EVAN L. PREISSER, ANURAG A. AGRAWAL, JAMIE L. RAFTER

Publication: Ecological Entomology

Publisher: John Wiley and Sons

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Winter cascading of cold water in Lake Geneva

Ilker Fer¹ and Ulrich Lemmin

Laboratoire de Recherches Hydrauliques, Ecole Polytechnique Fédérale de Lausanne, Lausanne, Switzerland

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ofilings con-December 1998,

during experiment I and (b) 1200 and 1500 LT, 20 January 2000, during experiment II. The contours are in degrees Celsius. The profiling stations are indicated by arrows. Open circles in Figure 2a show the temperature miniloggers laid at the bottom, as well as the one 2 m off the bottom at 4



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Convection in Lakes

Damien Bouffard¹ and Alfred Wüest^{1,2}

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Additionally, the peculiar properties of the density function at low salinities/ temperatures leave distinctive traces. In this review, we present these various processes and connect observations with theories and model results.

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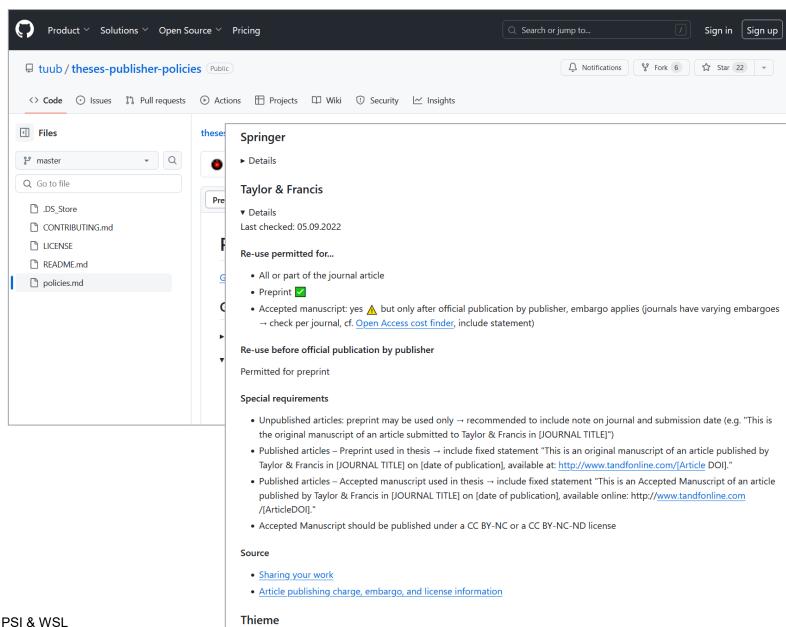
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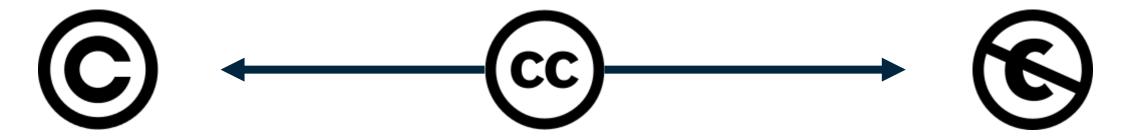


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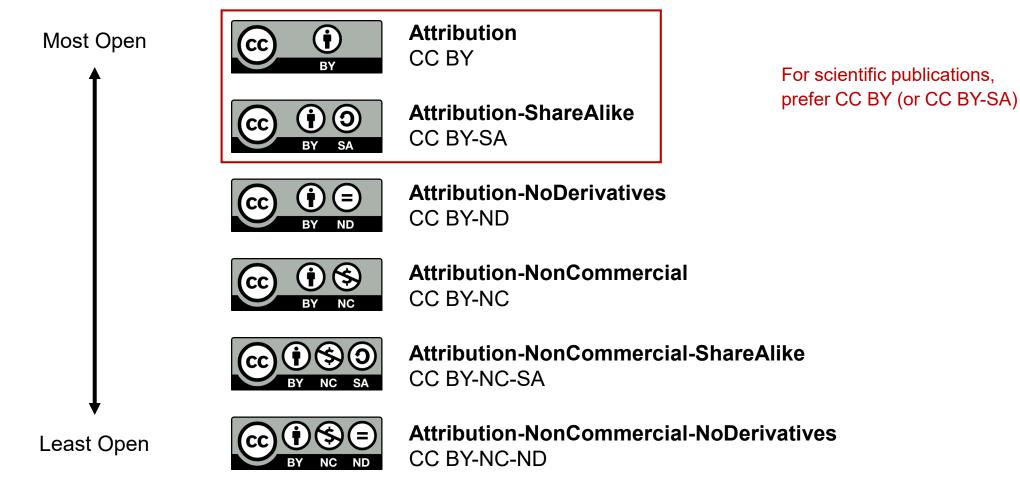
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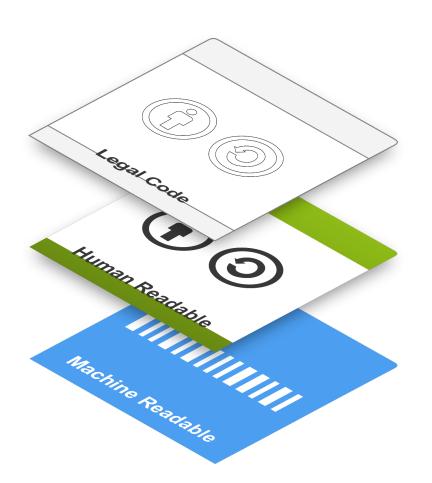


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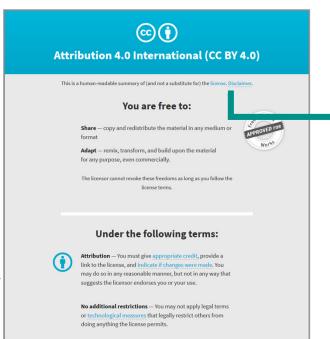


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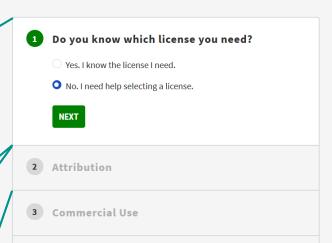
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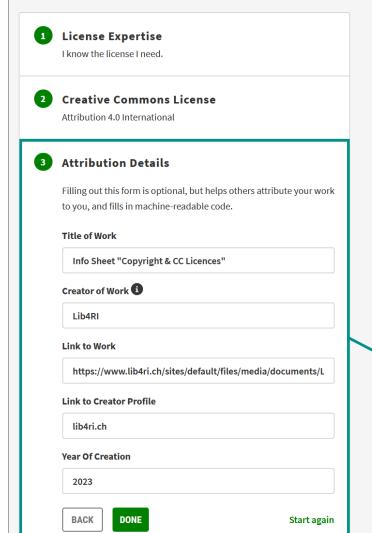




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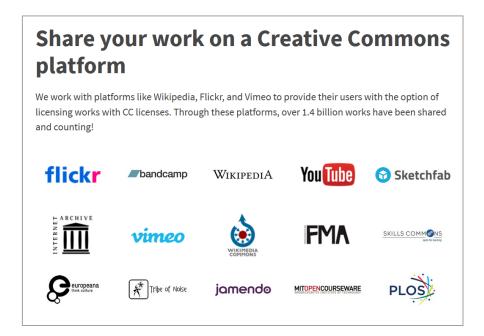
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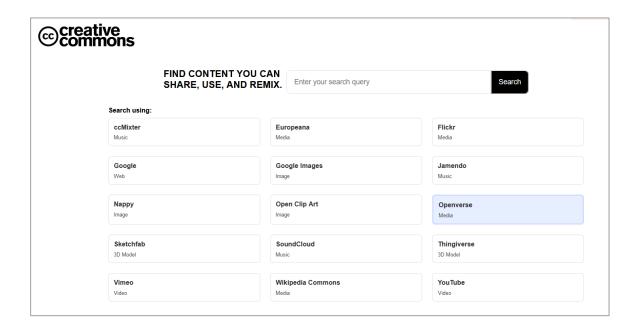
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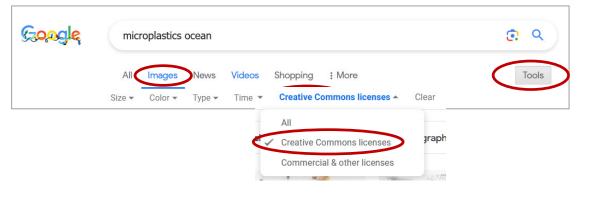
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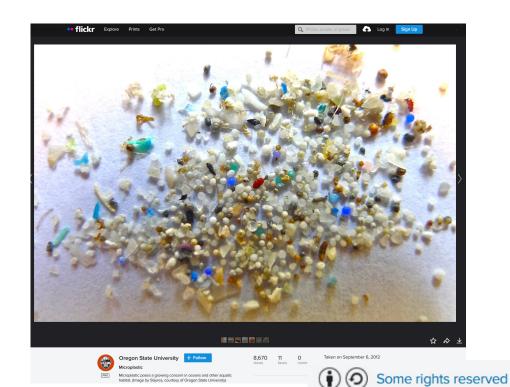
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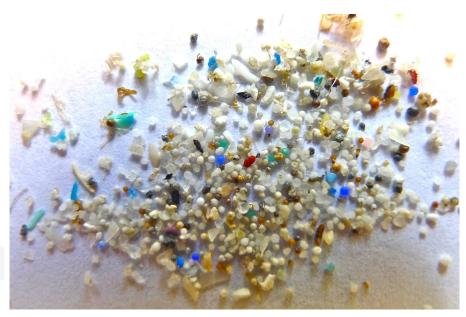
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mKate2 (transgenic)

Biological Photocatalysts

Green-Light-Activated Photoreaction via Genetic Hybridization of Far-Red Fluorescent Protein and Silk

Jung Woo Leem, Jongwoo Park, Seong-Wan Kim, Seong-Ryul Kim, Seung Ho Choi, Kwang-Ho Choi,* and Young L. Kim*

Fluorescent proteins often result in phototoxicity and cytotoxicity, in particular because some red fluorescent proteins produce and release

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1700863 (1 of 8)

fluorescent image of mKate2 (transgenic) silkworms.

acteristics of RFP suggest that semiconductor nanocrystals or conjugated nanoparticles for plasmonic photocatalysis can be replaced by phototoxic RFP.

Figure 1. Genetically encoded hybridization of far-red fluorescent protein (mKate2 and PDB ID: 3BXB) and silk for plasmonic photocatalysis-like

photosensitization. a) Schematic illustration of reactive oxygen species (ROS)-generating mKate2 (transgenic) silk under green light activation.

Superoxide (O2*) and singlet oxygen (1O2) are generated by mechanisms of electron (e1) transfer and energy (E) transfer, respectively. Photographs

of white (wild-type) and mKate2 (transgenic) silk cocoons and fluorescent image of mKate2 silk cocoons. Green light belongs to the peak wavelength

range of the solar spectrum. b) Construction of transfer vector p3xP3-EGFP-pFibH-mKate2 for mKate2 silkworm transgenesis. c) Photograph and

Some fluorescent proteins participate in Type I and Type II photosensitization reactions.[7] Predominant ROS generated by fluorescent proteins depends on the type of photosensitization reactions and the concentration of local molecular oxygen (i.e., electron acceptor). For example, (enhanced) green fluorescent protein, (E)GFP typically produces singlet oxygen (102) via Type II

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pFibH SV40pA p3×P3-eGFPpFibH-mKate2 Figure 1



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Representative genetic fusion of fluorescent proteins (e.g., mKate2) and silk (161). (a) Construction of transfer vector p3×P3-eGFPpFibH-mKate2 for mKate2 silkworm transgenesis using a gene-splicing piggyBac transposase method. For hybridization of mKate2 and silk, the mKate2 gene is fused with N-terminal and C-terminal domains of pFibH. The nucleotide sequences of the pFibH NTR and CTR are derived from GenBank accession number AF226688. (b) (left) Photograph and (right) fluorescent image of mKate2 (transgenic) silkworms. Abbreviations: CTR, C-terminal region (179 bp); eGFP, enhanced green fluorescent protein; intron, first intron (871 bp); ITR, inverted repeat sequences of piggyBae arms; mKate2, monomeric far-red fluorescent protein (720 bp) derived from Entacimaea quadricolor; NTR-1, N-terminal region 1 (142 bp); NTR-2, N-terminal region 2 (417 bp); pFibH, fibroin heavy-chain promoter domain (1,124 bn): PolyA poly(A) signal region (301 bn): 3×P3, 3×P3 promoter (273 bn): SV40, SV40 polyadenylation signal sequence (268 bp) Figure adapted from Reference 161 under a Creative Commons license (CC-BY-4.0).

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physical and biological properties that typical synthetic materials do not exhibit. These attributes have prompted a wide variety of silk research, including genetic engineering, biotechnological synthesis, and bioinspired fiber spinning, to produce silk proteins on a large scale and to further enhance their properties. In this review, we describe the basic properties of spider silk and silkworm silk and the important production methods for silk proteins. We discuss recent advances in reinforced silk using silkworm transgenesis and functional additive diets with a focus on biomedical applications. We also explain that reinforced silk has an analogy with metamaterials such that user-designed atypical responses can be engineered beyond what naturally occurring materials offer. These insights into reinforced silk can guide better engineering of superior synthetic biomaterials and lead to discoveries of unexplored biological and medical applications of silk.

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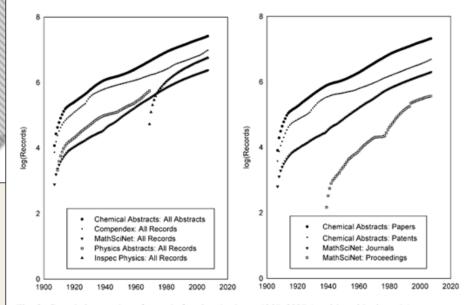
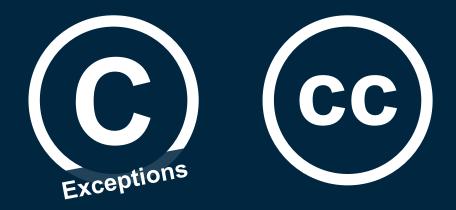


Fig. 2 Cumulative number of records for nine databases 1907-2007 (semi logarithmic scale)



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Let's sum up

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