

강의자료 다운로드

<http://epops.kr>

열람 메뉴

2019년 제2회 한국 DOI 센터 교육자료



<https://doi.org/10.8888/EPOPS201908261ZI>

발표자료 내려받기

The KIST logo is rendered in a white, stylized, handwritten font. It is positioned in the upper left quadrant of the slide, set against a background of a bright blue sky with scattered white clouds. The logo consists of the letters 'KIST' in a fluid, cursive style.

한국DOI센터

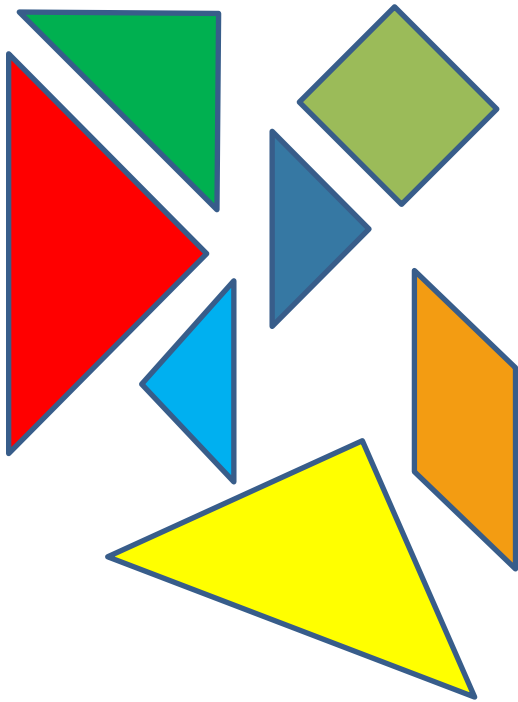
Learning by DOIing!

2019.8.28

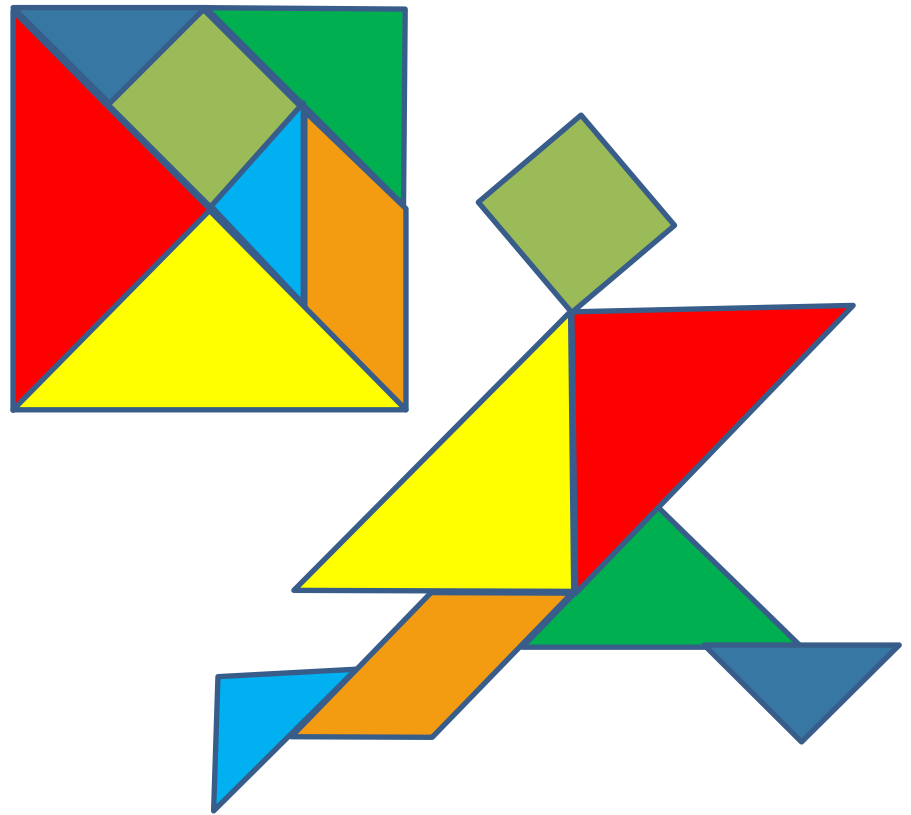
한국과학기술정보연구원



Learning by **DO**Ing!



암기학습



의미학습

목차

- 한국DOI센터 개요
- DOI 서비스 요약
- KoreaScience



한국 DOI 센터 개요

Korea Institute of
Science and Technology Information

세계적으로 한국 연구성과에 대한 접근성과 영향력 제고

국내 연구 정보와 데이터에 글로벌 표준식별체계(DOI)를 적용

유관기관 협력

- 콘텐츠 보유기관과 협력
- DOI RA들과 협력
- 타 표준식별체계 관리기관과 협력

고유 DOI 서비스

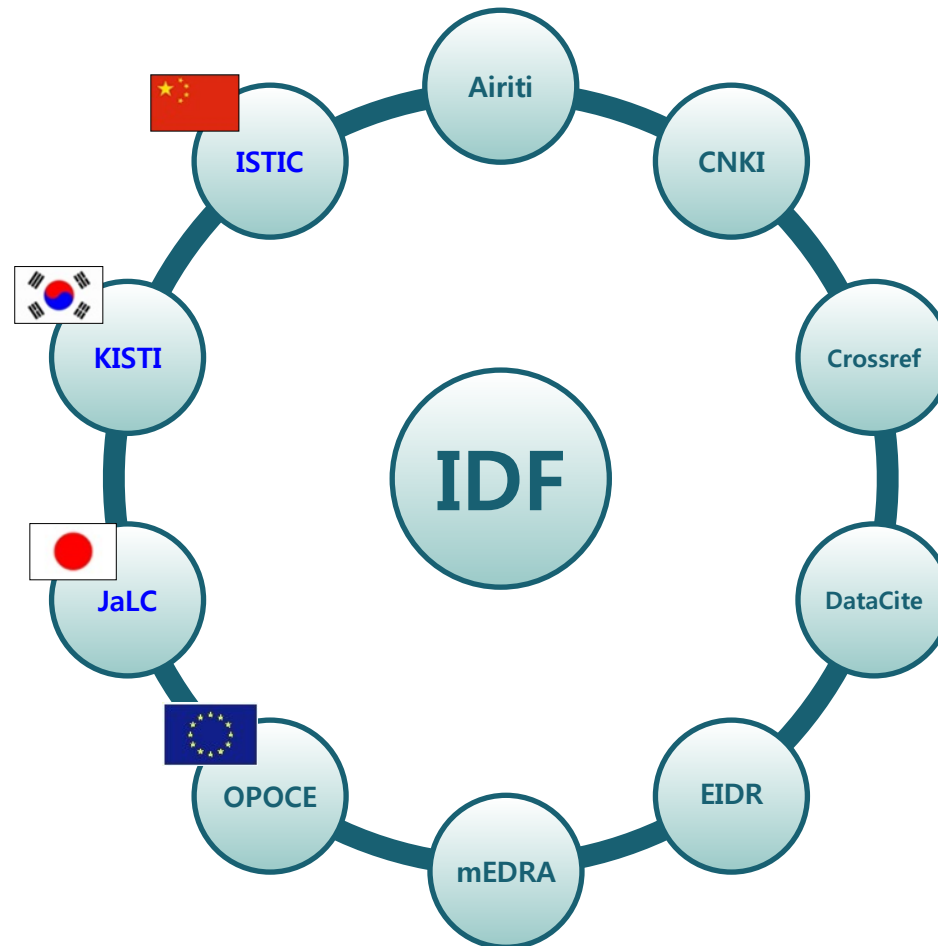
- DOI 등록관리 서비스
- 학술정보, 과학데이터, 공공데이터 영역별 서비스 발굴
- DOI 체계 기반의 정보서비스 산업 지원

데이터 표준화

- 데이터 식별, 표준화, 링크체계 지원
- 데이터 수집, 보존, 재사용을 위한 디지털 큐레이션 지원
- DOI 체계로 데이터 공유와 인용문화 확산

2015년 DOI 등록관리기관 추진 계획 수립

2016년 1월 1일 부터 **DOI 등록관리기관** 역할 수행



학술정보

- 국내 연구결과의 이용, 인용 및 영향력 제고
- 저널논문, 학술대회 프로시딩, 보고서, 표/그림 등

과학데이터

- 연구데이터 접근, 공유 및 인용 기반 조성
- 실험, 관측, 시뮬레이션 데이터 등

공공데이터

- 공공기관 데이터의 정리 표준화와 항구적 접근성 제고
- 특허, 통계, 식의약 정보 등

서비스산업

- 정보서비스 산업체의 비즈니스 모델 지원
- 정보유통, IoT 콘텐츠, 물류 등

회원 = 한국 DOI 센터의 파트너

회원 ≠ 한국 DOI 센터의 고객

DOI 등록 및 이용 현황

2019년 8월 26일 현재

회원기관 : 413개

해석건수 : 4,850천건/년

DOI 등록 : 15,254,056 건

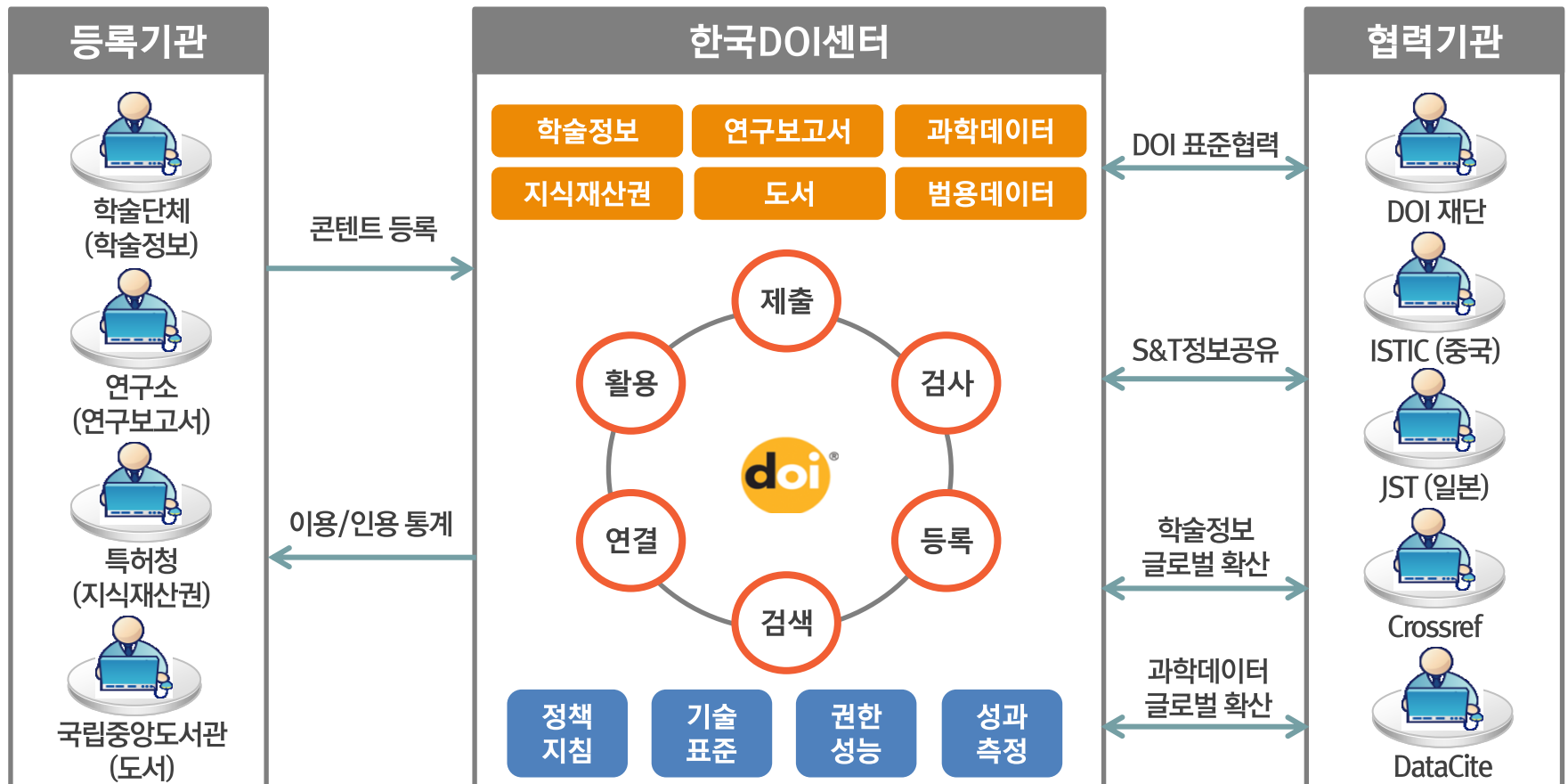
학술논문	프로시딩	연구보고서	과학데이터	단행본	지식재산권	범용데이터
238,132	314	45,519	150,623	2,565,192	12,127,141	127,135

DOI 서비스 소개

Korea Institute of
Science and Technology Information

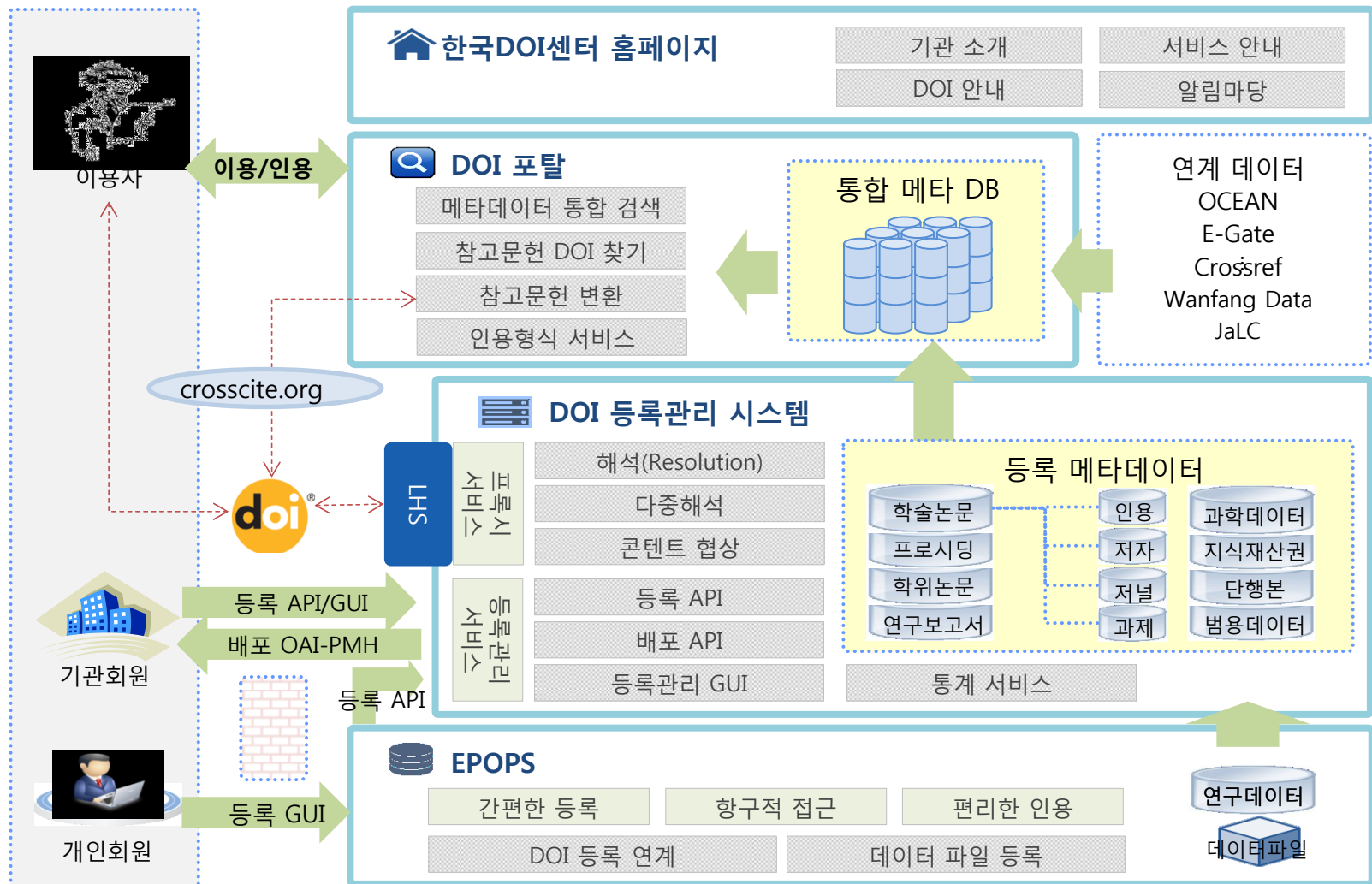
DOI 서비스 개요

DOI 체계로 콘텐츠의 편리하고 항구적인 접근을 보장하여, 세계적으로 콘텐츠 권리자의 영향력 제고를 위해 수행하는 일련의 활동



DOI 시스템 구성

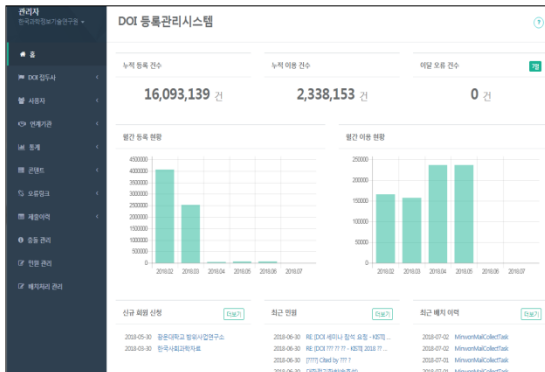
(DOI 등록관리) 콘텐츠의 메타데이터와 DOI, URL을 등록하고, 관리하는 기능
(DOI 포탈) DOI 등록된 콘텐츠를 찾아보고, 연결하고, 활용하는 서비스



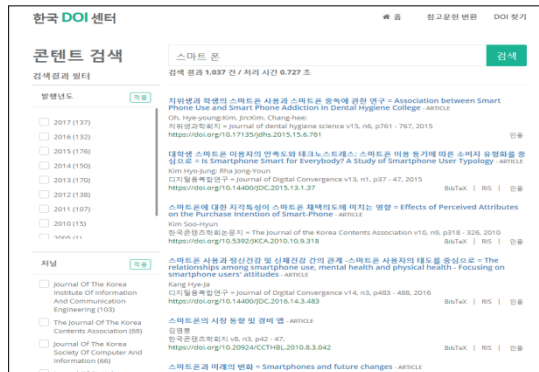
주요 DOI 서비스

DOI 등록관리
DOI 포탈
EPOPS

: <http://doi.or.kr/manage/>
: <http://data.doi.or.kr>
: <http://epops.kr>



[DOI 등록관리 화면]



[DOI 포탈 검색 화면]

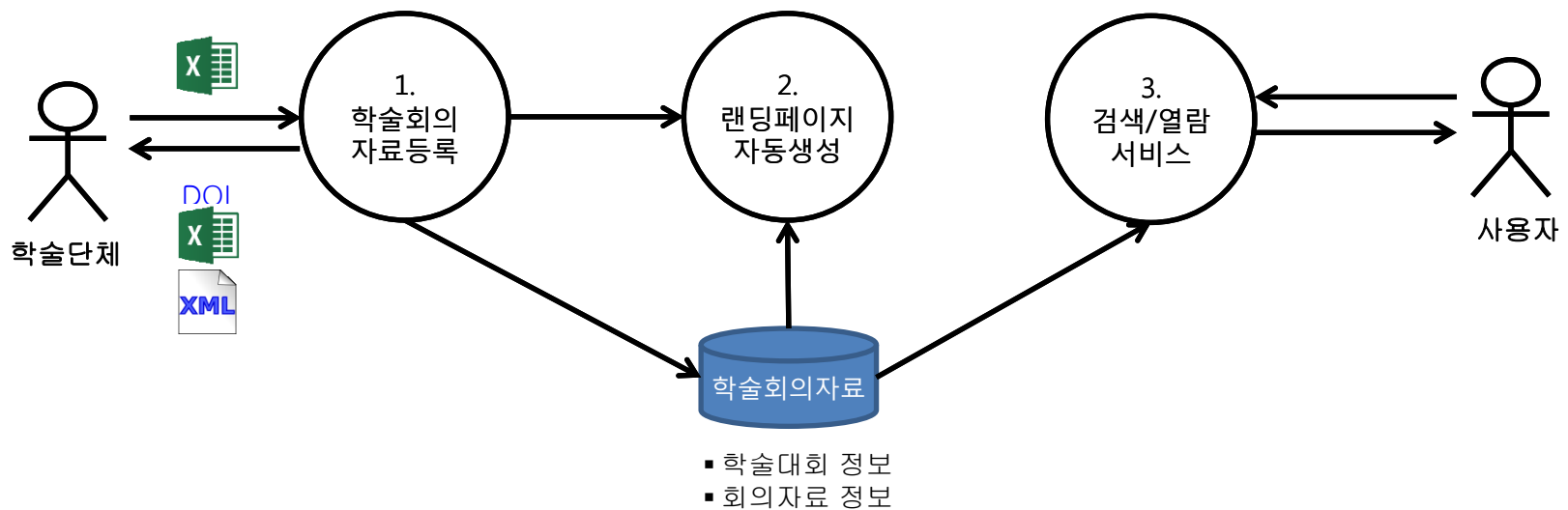


[EPOPS 메인 화면]

자동생성 랜딩 페이지

DOI 등록과 동시에 랜딩 페이지 자동생성
랜딩 페이지의 신속한 공개를 위한 용도로 활용

<http://data.doi.or.kr/{doi}>



[학술대회 프로시딩 랜딩페이지 자동 생성 개념도]

DOI 서비스 URL

DOI 등록관리	: http://doi.or.kr/manage/
랜딩페이지	: http://data.doi.or.kr/{DOI}
인용형식	: http://data.doi.or.kr/cite/{DOI}
피-인용정보	: http://data.doi.or.kr/citedby/{DOI}
이력정보	: http://data.doi.or.kr/history/{DOI}
QR 코드	: http://data.doi.or.kr/qr/{DOI}
HTML	: http://data.doi.or.kr/text/html/{DOI}
JSON	: http://data.doi.or.kr/application/json/{DOI}
BibTeX	: http://data.doi.or.kr/application/x-bibtex/{DOI}
RIS	: http://data.doi.or.kr/application/x-Research-Info-Systems/{DOI}
Citeproc+json	: http://data.doi.or.kr/application/citeproc+json/{DOI}

예시)

<https://data.doi.or.kr/10.3743/KOSIM.2011.28.2.117>

<https://data.doi.or.kr/cite/10.3743/KOSIM.2011.28.2.117>

KoreaScience

<http://www.koreascience.kr>

Korea Institute of
Science and Technology Information

KoreaScience 란?

KoreaScience는 1997년부터 한국과학기술정보연구원이 개발 및 운영하는 과학 기술 분야의 국내 학술정보를 위한 개방형 플랫폼.

<http://www.koreascience.or.kr>

KoreaScience

검색할 단어를 입력하세요

학술지 발행처 서비스소개

과학기술 강국으로 가는
국내 학술정보의 길라잡이

KoreaScience는 1997년부터 한국과학기술정보연구원(KISTI)이 개발 및 운영하는 과학 기술 분야의 국내 학술정보를 위한 개방형 플랫폼입니다.

논문 1,481,219

학술지 1,661

발행처 836

KoreaScience에서는 자연과학, 생명과학, 공학 및 인문사회과학 분야의 학술정보를 제공합니다.

자연과학

수학

물리학

화학

지구과학(지구/대기/해양/천문)

인기 논문

과냉각 열교환기 용량 변화에 따른 인젝션 히트펌프의 성능 특성
한국지열에너지학회논문집 / 10권 3호 / 2014, pp.17-23

전도성 니켈분말-에폭시수지 복합체의 전기적 특성
한국유화학회지 / 31권 2호 / 2014, pp.329-336

Candelilla Wax Nanoemulsions Prepared by Phase Inversion Composition (PIC) Method
한국유화학회지 / 31권 2호 / 2014, pp.203-209

최신 학술지

대한수학회지
56권 1호 / 2019.01.01
0304-9914

천문학회지
51권 6호 / 2018.12.31
1225-4614

콘텐츠 범위

논문
1,510,538편

학술지
1,661종

발행처
841개

Bulletin of the Korean Chemical Society
Volume 35 Issue 12 / Pages 3411-3420 / 2014 / 0253-2964pISSN / 1229-5949eISSN
대한화학회 (Korean Chemical Society)

Nanocomposites Based on Polytetrafluoroethylene and Ultrahigh Molecular Weight Polyethylene: A Brief Review

Kirilova, Lu V., Nalimov, L.A., Okhlopova, A.A., Steptsova, S.A., Tsou, Cheonho, Cho, Jin-Ho
DOI: 10.1002/bkcs.2014.35.12.3411

주제: 2014.06.12 심사: 2014.08.20 발행: 2014.12.20

<https://doi.org/10.1002/bkcs.2014.35.12.3411> [HTML](#) [PDF](#) [DOI](#)

초록
Deficiencies in wear and frost resistance as well as mechanical strength constitute the main causes of equipment failure under the harsh climatic conditions of the Earth's polar regions. To improve the properties of the materials used in this equipment, nanocomposite composites have been prepared from clay, such as talc, kaolin, bentonite, and montmorillonite in combination with polytetrafluoroethylene (PTFE) or ultrahigh molecular weight polyethylene (UHMWPE). A number of techniques have been proposed to disperse silicate particles in PTFE or UHMWPE polymer matrices, and several successful processes have even been widely applied. Polymer nanocomposites that exhibit enhanced mechanical and thermal properties are promising materials for replacing metals and glass in the equipment intended for Arctic use. In this article, we will review PTFE- and UHMWPE-based layered silicate nanocomposites.

키워드
Nanocomposites; Polytetrafluoroethylene; Ultrahigh molecular weight polyethylene; Arctic use

파일
[HTML](#) [PDF](#) 다운로드

참고문헌
1. Huggins, J. J. *Cryogenic Temperature*, Kluwer Academic Publishers, 1993.
2. Paul, D. R.; Barakat, L. M. *Polym.* 2008, 49, 3197. <https://doi.org/10.1021/poly.2008.04.012>
3. Huggins, J. J.; Huggins, M.; Okamoto, M.; Ganga, R. E. *Compos. Mater.* 2006, 46, 1511. <https://doi.org/10.1016/j.compos.2006.06.021>

Bulletin of the Korean Chemical Society
대한화학회 (Korean Chemical Society)
발간 / 0253-2964pISSN / 1229-5949eISSN

Aim & Scope
Bulletin of the Korean Chemical Society accepts creative research papers in all fields of pure and applied chemistry written in English only. - Analytical Chemistry - Biochemistry - Industrial Chemistry - Inorganic Chemistry - Life Science Chemistry - Macromolecular Chemistry - Medicinal Chemistry - Organic Synthesis - Non-Synthetic Organic Chemistry - Physical Chemistry - Materials Chemistry Bulletin of the Korean Chemical Society has been published since 1980 as the official research journal of the Korean Chemical Society to reach out to the chemical community worldwide. It is now published monthly. All of the articles in this journal are indexed in SC, SCOPUS, and KCI. Publication of Bulletin of the Korean Chemical Society (BKS) abbreviation: Bull. Korean Chem. Soc. is partially supported by the Korean Federation of Science and Technology Societies Grant funded by the Korean Government. The web edition (ISSN: 0253-2964pISSN, 1229-5949eISSN) of the Bulletin of the Korean Chemical Society (Vol. 20 - Vol. 28) is published by the Korean Chemical Society through the cooperation project with the Information Center for Chemistry.

<http://journal.ksnet.or.kr/> IF6.109(2010) [SCOPUS](#) [KCI](#)

2014

- 제35권 12호
- 제35권 11호
- 제35권 10호
- 제35권 9호
- 제35권 8호
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- 제35권 3호
- 제35권 2호
- 제35권 1호

제35권 12호

- Nanocomposites Based on Polytetrafluoroethylene and Ultrahigh Molecular Weight Polyethylene: A Brief Review
Kirilova, Lu V., Nalimov, L.A., Okhlopova, A.A., Steptsova, S.A., Tsou, Cheonho, Cho, Jin-Ho 3411
<https://doi.org/10.1002/bkcs.2014.35.12.3411> [HTML](#) [PDF](#)
- Synthesis of Silicon Nanocrystal by Magnesium Directed Reduction of the Silica Nanoparticle Formed in Micro-Emulsion of Reverse Micelle
Lee, Thu-Huong, Jeong, Hyun-Dam 3421
<https://doi.org/10.1002/bkcs.2014.35.12.3421> [HTML](#) [PDF](#)
- Mechanistic Studies on Alcoholysis of α -Keto esters
Song, Seung-Gil, Kim, Hee-Han, Kiwon Woo, Park, Tae-Jun, Park, Bong-Ser 3423
<https://doi.org/10.1002/bkcs.2014.35.12.3423> [HTML](#) [PDF](#)

2013

2012

2011

대한화학회 (Korean Chemical Society)
기관장: 김용석 / 설립일: 1946.07.07
136075 서울 성북구 안암동5가 34-1 한국화학회관4층
대표 전화번호: 02) 953-2095 / 팩스번호: 02) 953-2093
<http://www.ksnet.or.kr>

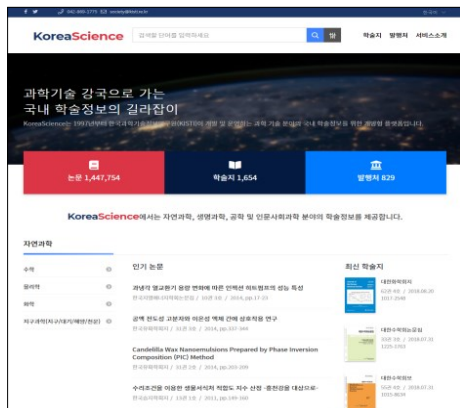
간행물 목록

Bulletin of the Korean Chemical Society
0253-2964pISSN / 1229-5949eISSN / 1980.03.30 -
<http://journal.ksnet.or.kr/> [SCOPUS](#) [KCI](#)

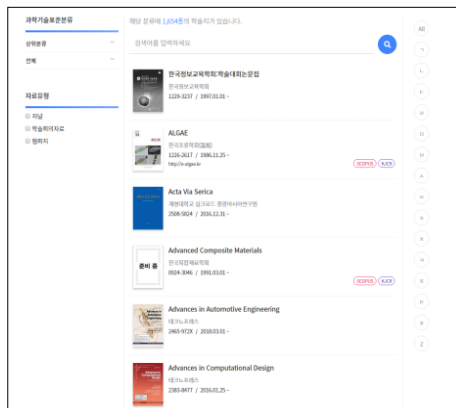
대한화학회지 (Journal of the Korean Chemical Society)
1017-2548pISSN / 2234-8530eISSN / 1949.12.30 -
http://journal.ksnet.or.kr/main_login.html?npage=login [SCOPUS](#) [KCI](#)

검색과 열람

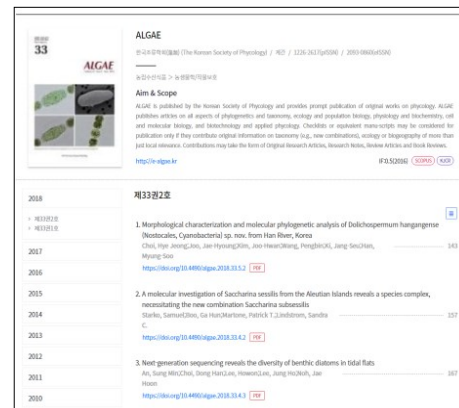
논문에 대한 키워드 검색과 검색 결과에 대한 시각화 분석.
국가과학기술표준분류체계를 학술지에 적용하여 발행처, 학술지에 대한 분류별 열람.
학술지 권호별 논문 열람.



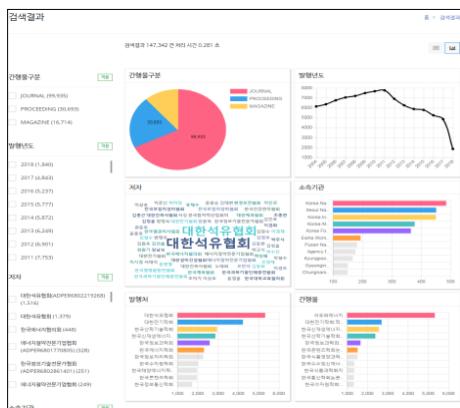
홈 화면



학술지 목록 열람



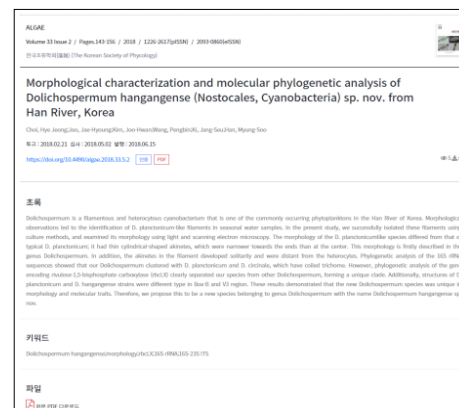
학술지 권호 열람



논문 검색 결과 분석



논문 검색 목록




논문 상세 보기

학술단체가 논문 본문을 KoreaScience에서 편집하고 공개 가능(2019년 10월~)

Journal of Information Science Theory and Practice
Volume 6 Issue 3 / Pages.6-15 / 2018 / 2287-9099p(ISSN) / 2287-4577(eISSN)
Korea Institute of Science and Technology Information (한국과학기술정보연구원 과학기술정보센터)

A Combinational Method to Determining Identical Entities from Heterogeneous Knowledge Graphs

Kim, Haklae
Received : 2017.12.07 Accepted : 2018.07.09 Published : 2018.09.30
<https://doi.org/10.1633/jstap.2018.6.3.1> [Copy](#) [Citation](#) [PDF](#)  DOI QR Code

Abstract
With the increasing demand for intelligent services, knowledge graph technologies have attracted much attention. Various application-specific knowledge bases have been developed in industry and academia. In particular, open knowledge bases play an important role for constructing a new knowledge base by serving as a reference data source. However, identifying the same entities among heterogeneous knowledge sources is not trivial. This study focuses on extracting and determining exact and precise entities, which is essential for merging and fusing various knowledge sources. To achieve this, several algorithms for extracting the same entities are proposed and then their performance is evaluated using real-world knowledge sources.

Keywords
entity consolidation; knowledge extraction; knowledge graph; knowledge creation; knowledge interlinking

[본문 편집](#)



A Combinational Method to Determining Identical Entities from Heterogeneous Knowledge Graphs

5. IMPLEMENTATION OF THE BELIEF-BASED STRATEGY

The proposed strategies are developed in the entity extraction framework (Kim, Liang, & Ying, 2014), which is to extract identical entities among heterogeneous knowledge sources. In particular, entity matching is carried out by configured property values for each entity pair. As illustrated in Fig. 1, it is comprised of several components: Preprocessor for normalising entities and properties and to extract a set of URI from knowledge sources, Matching for extracted entities and properties based on exact and similarity measure, Optimisation for better extracting a set of same entity pairs using several strategies, and Knowledge Base Management that aims to create and interlink a knowledge base for the consolidation results. Knowledge bases management Entity consolidation engine Preprocessor Normalisation Property combination URI encoding & decoding Matching Exact relationship extraction Similarity joins Optimisation Max confidence Threshold Belief-based

Entity consolidation engine

Knowledge bases management


Metadata Knowledge bases Intermediate datasets

Currently, this framework is being used for extracting relations from both Wikidata and Freebase. To identify the same entities from both



Journal of Information Science Theory and Practice
Volume 6 Issue 3 / Pages.6-15 / 2018 / 2287-9099p(ISSN) / 2287-4577(eISSN)
Korea Institute of Science and Technology Information (한국과학기술정보연구원 과학기술정보센터)

A Combinational Method to Determining Identical Entities from Heterogeneous Knowledge Graphs

Kim, Haklae
Received : 2017.12.07 Accepted : 2018.07.09 Published : 2018.09.30
<https://doi.org/10.1633/jstap.2018.6.3.1> [Copy](#) [Citation](#) [PDF](#)  DOI QR Code

Abstract
With the increasing demand for intelligent services, knowledge graph technologies have attracted much attention. Various application-specific knowledge bases have been developed in industry and academia. In particular, open knowledge bases play an important role for constructing a new knowledge base by serving as a reference data source. However, identifying the same entities among heterogeneous knowledge sources is not trivial. This study focuses on extracting and determining exact and precise entities, which is essential for merging and fusing various knowledge sources. To achieve this, several algorithms for extracting the same entities are proposed and then their performance is evaluated using real-world knowledge sources.

Keywords
entity consolidation; knowledge extraction; knowledge graph; knowledge creation; knowledge interlinking

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1. INTRODUCTION

With the increasing demand for intelligent services, knowledge graph technologies have attracted much attention for applications, ranging from question-answer systems to enterprise data integration (Gabrilovich & Usunier, 2016). A number of research efforts have already developed open knowledge bases such as DBpedia (Lehmann et al., 2009), Wikidata (Vrandečić, 2012), YAGO (Suchanek, Kasenc, & Welkum, 2007), and Freebase (Bollacker, Evans, Paritosh, Sturge, & Taylor, 2008). Most open knowledge bases heavily use Linked Data technologies for constructing, publishing, and accessing knowledge sources. Linked data is one of the core concepts of the Semantic Web, also called the Web of Data (Bizer, Cyganiak, & Heath, 2007; Grottrun & Staab, 2014). It involves making relationships such as links between datasets understandable to both humans and machines. Technically, it is essentially a set of design principles for sharing machine-readable interlinked data on the Web (Berners-Lee, 2009). According to LODstats, 1 149B triples from 2,973 datasets have been published in public, and 1,799,869 identical entity relations have already been made from 251 datasets. The standard method for stating a set of the same entities is to use the owl:same property. This property is used to describe homogeneous instances that refer to the same object in the real world. It aims to indicate that two uniform resource identifier (URI) references actually refer to the same thing (Berners-Lee, 2009). Existing knowledge bases can be used to construct new ones to meet certain objectives. Since constructing a new knowledge base from scratch is not easy. However, various issues arise when creating a new knowledge base by integrating multiple knowledge sources. One issue is whether the relationships in the existing knowledge base are always reliable. All individual instances of given knowledge sources should be identified and linked to these sources before integrating knowledge sources (Halpin, Hayes, McCusker, McGuinness, & Thompson, 2010). The problem of discovering the same entities in various data sources has been studied extensively. It is variously referred to as entity reconciliation (Enriquez, Mayo, Cuaresma, Ross, & Staples, 2017), entity resolution (Sefanidis, Efthymiou, Herschel, & Christophides, 2014), entity consolidation (Hogan, Zimmermann, Umbrich, Polleres, & Decker, 2012), and instance matching (Castano, Ferrara, Montanelli, & Lorusso, 2008). All of these approaches are very important for 1 <http://lodstats.aksw.org/stats> identifying the same relationships to extract and generate knowledge from different data sets. Entity consolidation for data integration at the instance level has attracted interest in the semantic web and linked data communities. It refers to the process of identifying same entities across heterogeneous data sources (Hogan et al., 2012). A problem can be simplified such that different identifiers are used for identical entities scattered across different datasets in a web of data. Because redundancy causes an increase in noisy or unnecessary information across a distributed web of data, identifying the same items can be advantageous in that multiple descriptions of the same entity can mutually complete and complement each other (Pouliou et al., 2017). This study proposes a combinational approach for extraction and determining same entities from heterogeneous knowledge sources. It focuses

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