

CAS-JAICI 共催
CAS SciFinder フォーラム 2022

一歩進んだ文献検索のヒント CAS Lexicon、Prior Art Analysisの活用



CAS SciFinder[®] の最近の主な機能強化

1

実装時期	強化内容
2021年12月	・ Prior Art Analysis 機能の搭載
2022年 1月	・ Advanced Search の強化 ・ Citation Map の強化
2月	・ Save All 機能の追加
3月	・ 成分 CAS 登録番号 (CAS RN [®]) での検索機能追加 ・ Retrosynthesis Planner の強化
4月	・ InChI Key での検索機能追加
5月	・ CAS Lexicon 機能の搭載
7月	・ Combine 機能の強化 ・ Biosequences Search に Sequence Length フィルターを追加
9月	・ Knowledge Graph 機能の搭載
10月	・ Precision Search の導入

全件保存に対応 (最大 2 万件)

モノマーの CAS RN[®] を
指定したポリマー検索に対応

フレーズ検索の精度向上



Contents

1. CAS Lexicon - 統制語を用いた文献調査
2. Prior Art Analysis を用いた
先行技術文献の調査



CAS Lexicon - 統制語を用いた文献調査

キーワード検索で得られた回答件数が多く、
確認に時間が掛かる

References search for "PET imaging"

263,455 Results

Sort: Relevance

Filter Behavior: Filter by, Exclude

Document Type, Language, Publication Year, Available at My Institution, Author, Organization, Publication Name, Concept, CA Section, CAS Solutions, Formulation Purpose

1. PET imaging of amyloid in Alzheimer's disease
By: Nordberg, Agneta
Lancet Neurology (2004), 3(9), 519-527 | Language: English
A review. Alzheimer's disease (AD) is the most common form of dementia and is characterized by progressive impairment in cognitive function and behavior. The pathol. features of AD include neuritic plaques composed of amyloid- β peptide (A β) fibrils, neurofibrillary tangles of hyperphosphorylated tau, and neurotransmitter deficits. Increases in the concentration of A β in the course of the disease with subtle effects on synaptic efficacy will lead to gradual increase in the load of amyloid plaques and progression in cognitive impairment. Direct imaging of amyloid load in patients with AD in vivo would be very useful for the early diagnosis of AD and the development and assessment of new treatment strategies. Three different strategies are being used to develop compounds suitable for in vivo imaging of amyloid deposits in human brains. Monoclonal antibodies against A β and peptide fragments have had limited uptake by the brain when tested in patients with AD. When putrescine-gadolinium-A β has been injected into transgenic mice overexpressing amyloid, labeling has been observed with MRI. The small mol. approach for amyloid imaging has so far been most successful. The binding of different derivatives of Congo red and thioflavin has been studied in human autopsy brain tissue and in transgenic mice. Two compounds, fluorine-18-labeled-FDDNP and carbon-11-labeled-PIB, both show more binding in the brains of patients with AD than in those of healthy people. Adnl. compounds will probably be developed that are suitable not only for PET but also for single photon emission CT (SPECT).

2. Molecular Imaging with PET
By: Ametamey, Simon M.; Honer, Michael; Schubiger, Peter
Chemical Reviews (Washington, DC, United States) (2008)
A review.

4. PET imaging of inflammation biomarkers
By: Wu, Chenxi; Li, Fang; Niu, Gang; Chen, Xiaoyuan
Theranostics (2013), 3(7), 448-466, 19 pp. | Language: English
A review. Inflammation plays a significant role in many disease processes. Development in mol. imaging in recent years provides new insight into the diagnosis and treatment evaluation of various inflammatory diseases and diseases involving inflammatory process. Positron emission tomog. using ¹⁸F-FDG has been successfully applied in clin. oncol. and neurol. and in the inflammation realm. In addition to glucose metabolism, a variety of targets for inflammation imaging are being discovered and utilized, some of which are considered superior to FDG for imaging inflammation. This review summarizes

関連度順表示でも、目的の文献にすぐにたどり着けない

検索に使ったキーワードは適切?



- 検索の対象：タイトル、抄録、Keywords、Concepts
- Concepts：主題となるキーワード(統制語)を収録

タイトル

PET imaging of amyloid in Alzheimer's disease

Substances (0) Reactions (0) Citing (273) Citation Map

JOURNAL
Source
Lancet Neurology
Volume: 3
Issue: 9
2004
DOI:
10.1016/s1474-4422(04)00853-1

抄録

Keywords
Concepts

By: Nordberg, Agneta
A review. Alzheimer's disease (AD) is the most common form of dementia and is characterized by progressive impairment in cognitive function and behavior. The pathol. features of AD include neuritic plaques composed of amyloid- β peptide (A β) fibrils, neurofibrillary tangles of hyperphosphorylated tau, and neurotransmitter deficits. Increases in the concentration of A β in the course of the disease with subtle effects on synaptic efficacy will lead to gradual increase in the load of amyloid plaques and progression in cognitive impairment. Direct imaging of amyloid load in patients with AD in vivo would be very useful for the early diagnosis of AD and the development and assessment of new treatment strategies. Three different strategies are being used to develop compounds suitable for in vivo imaging of amyloid deposits in human brains. Monoclonal antibodies against A β and peptide fragments have had limited uptake by the brain when tested in patients with AD. When putrescine-gadolinium-A β has been injected into transgenic mice overexpressing amyloid, labeling has been observed with MRI. The small mol. approach for amyloid imaging has so far been most successful. The binding of different derivatives of Congo red and thioflavin has been studied in human autopsy brain tissue and in transgenic mice. Two compounds, fluorine-18-labeled-FDDNP and carbon-11-labeled-PIB, both show more binding in the brains of patients with AD than in those of healthy people. Adnl. compounds will probably be developed that are suitable not only for PET but also for single photon emission CT (SPECT).

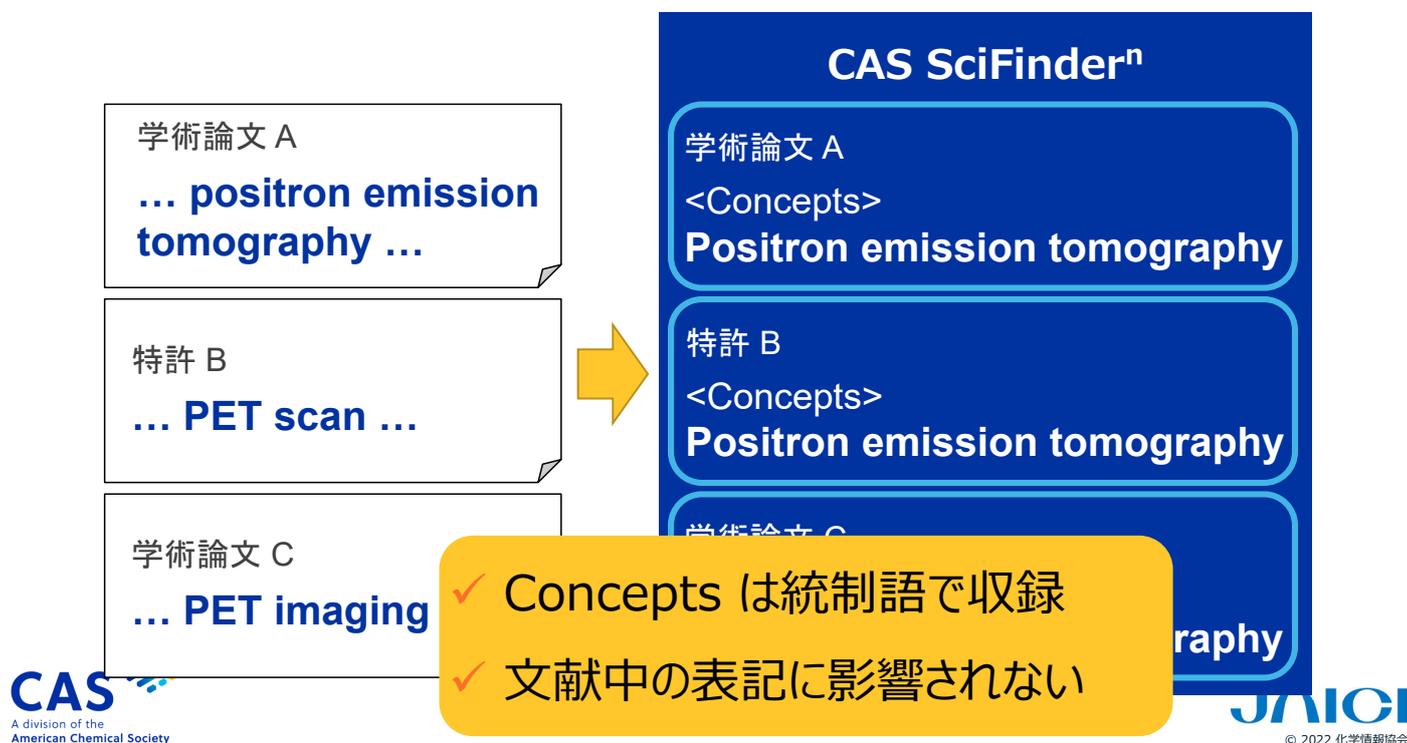
Keywords: review amyloid peptide PET imaging Alzheimer disease

Concepts

- Alzheimer disease
- NMR imaging
- NMR imaging agents
- Positron emission tomography
- Radiodiagnosis
- Tomography imaging agents
- Monoclonal antibodies, labeled
- Role: Diagnostic Use
- β -Amyloid
- Role: Biological Study, Unclassified

主題を対象とした検索
⇒ 適合性の高い文献が見つけれられる

- 統制語とは、一つの概念を一つの語で表現するようデータベース中で統制された語



統制語のシソーラス

- 統制語は、上位語・下位語、同義語などの階層関係を有している

上位語

Tomography (トモグラフィ)

Positron emission tomography
(陽電子放射形断層撮影法)

同義語

- PET imaging
- PET scan

下位語

Immuno-PET (免疫 PET 画像診断)

Positron emission tomography-computed tomography

CAS が収集した文献情報由来の統制語シソーラス

使い方

- CAS が付与した統制語を調べる
- 上位、下位に属する統制語を確認する
- 調べた統制語を使って、文献検索をする

References

Search by Keyword, Substance Name, CAS RN, Patent Number, PubMed ID, AN, CAN, and/or DOI. [Learn More](#)

Enter a query... Draw Q

- Author Name Enter last name, first name middle name. X

Example: Schubert, J A

+ Add Advanced Search Launch CAS Lexicon をクリック

Launch CAS Lexicon CAS Lexicon enables you to browse the CAS General Thesaurus to find indexed concepts and substances to build a Reference query with up to 1,000 indexed search terms.

CAS Lexicon 操作方法

1. タームを入力する

入力したタームが統制語ではない場合、統制語の候補が表示されるので、適切な統制語を選択する

Search CAS Lexicon

PET imaging Search Concept

Multiple preferred terms found, please select one concept to continue...

Immuno-PET

Positron emission tomography

適切な統制語を選択

2. 統制語と上位語・下位語、関連語を確認する

Search CAS Lexicon

Positron emission tomography Search Concept

^ Preferred Term

Positron emission tomography

This will search synonyms: PET; PET imaging; PET (positron emission tomography); PET scan; PET tomog.; PET tomography; Positron-emission laminog.; Positron-emission laminography; Positron-emission tomog.

[View fewer synonyms](#)

Select a boolean operator OR Add Term(s)

選択した統制語を検索式に追加

2. 統制語と上位・下位概念、関連語を確認する

Positron emission tomography Search Concept

^ Broader Terms (1) Select All

Tomography

^ Narrower Terms (2) Deselect All

Immuno-PET

Positron emission tomography-computed tomography

Select a boolean operator OR Add Term(s)

^ Related Terms (7)

13N-Ammonia

18F-Flutemetamol

Fluorine-18 fluorodeoxyglucose

Ga 68 DOTATATE

Ga 68 DOTATOC

複数の統制語を検索式に追加する場合、演算子 (AND / OR / NOT) を選択可能

3. 選択した統制語を用いて検索する

Your Query

You may include up to 1,000 terms in a search. Clear All

Positron emission tomography ×

OR

Positron emission tomography - Narrower Terms (2 Concepts) ×

[Learn more about CAS Lexicon searching.](#) Q

3. 選択した統制語を用いて検索する

References search for 3 CAS Lexicon Terms

Substances Reactions Citing Knowledge Graph Save and Alert

Filter Behavior 35,857 Results Sort: Relevance View: No Abstract

Filter by Exclude

Document Type

- Journal (28K)
- Patent (5,722)
- Review (5,382)
- Book (38)
- Clinical Trial (1,484)

View All

Language

Publication Year

Clinical use of 18F-FDG PET/CT in the differential diagnosis of patients with primary and secondary adenoid cystic carcinoma of the lung: a retrospective cohort study

By: Sun, Xiaolin; Gu, Weiqing; Yuan, Hui; Wang, Siyun; Yang, Yang; Evangelista, Laura; Zhang, Liyan; Jiang, Lei
Translational Lung Cancer Research (2022), 11(8), 1643-1656 | Language: English, Database: CAPlus and MEDLINE

[View Abstract](#)

[Full Text](#)

Clinical use of 18F-FDG PET/CT in the differential diagnosis of patients with primary and secondary adenoid cystic carcinoma of the lung: a retrospective cohort study

By: Sun, Xiaolin; Gu, Weiqing; Yuan, Hui; Wang, Siyun; Yang, Yang; Evangelista, Laura; Zhang, Liyan; Jiang, Lei

Adenoid cystic carcinoma (ACC) of the lung (ACCL) is a rare malignancy and includes primary ACCL (PACCL) and secondary ACCL (SACCL) metastasized from the ACC of the head and neck. Fluorine-18-fluorodeoxyglucose positron emission tomography/computed tomography (18F-FDG PET/CT) has been shown to be useful in the differential diagnosis between primary and metastatic lung lesions. This study retrospectively investigated the role of 18F-FDG PET/CT in combination with clinicopathol. findings in the management of patients with primary or secondary ACCL. Clinicopathol. characteristics and 18F-FDG PET/CT metabolic parameters of 29 patients with PACCL and 11

Keywords: Clin use secondary adenoid cystic carcinoma; Adenoid cystic carcinoma of the lung (ACCL); FDG; positron emission tomography/computed tomography (PET/CT); progression-free survival (PFS)

[View PDF](#) [Full Text](#)

Concepts

- Diagnosis: Pleura
- Disease signs and symptoms: [Positron emission tomography](#)
- Dysphonia: [Positron emission tomography-computed tomography](#)

指定した統制語で
ヒット

JOURNAL

Source
Translational Lung Cancer Research
Volume: 11
Issue: 8
Pages: 1643-1656
Journal/ Article
2022
DOI:
[10.211037/tlcr-22-509](https://doi.org/10.211037/tlcr-22-509)

CODEN: TLCRD9
ISSN: 2218-6751
ISSN-L: 2218-6751

Database Information
AN: 2022:2467088
CAN: 180:213467
PubMed ID: 36090648
CAPlus and MEDLINE

Company/Organization

「生分解性ポリマーの熱安定性」を
テーマとした的確な文献調査

キーワード：

Biodegradable polymer

Thermal stability



- ✓ 主題 (統制語) を対象とした的確な検索が可能
⇒ 件数が多く、回答が確認しきれない時におすすめ
- ✓ 統制語のシソーラスを確認し、検索に利用できる
⇒ 目的に合致する適切なキーワードを確認したい
ときにおすすめ



Prior Art Analysis を用いた 先行技術文献の調査

先行技術調査でよく聞くお困り事

17

調査件数が多い上に、掛かる負担が大きい

先行技術文献の探し方が
分からない

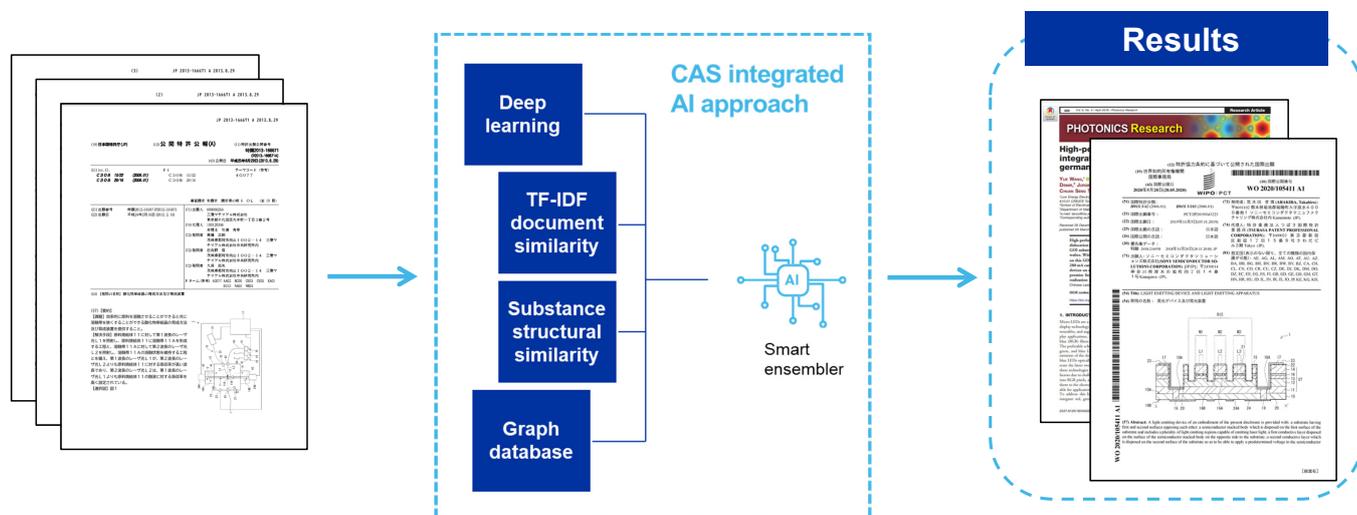
先行技術文献をすぐに確認したい
のに、調査に時間がかかる

網羅的な検索を行うために
どのような情報を用いて
検索すればいいの？



類似特許検索エンジン (PaSE) で先行技術文献を提案

- 特許の全文、特許分類(IPC)、索引情報を基に解析



CAS とブラジル特許庁が協業開発
各国特許庁での利用を検討中



Prior Art Analysis の特長

- 先行技術文献の調査を簡単かつ迅速に！
- 特許および非特許の文献が得られる
- 得られた情報を関連度順に表示
- キーワード検索など、他の検索方法では見つからなかった先行技術文献が得られる可能性あり



1. 注目する特許の詳細情報画面で、 Get Prior Art Analysis をクリック

耐熱性に優れた食品用生分解性シートに関する特許

By: Lee, Gyu Deuk; Lee, Gyu Dong

Patent Number: KR2255395

Kind Code: B1

Assignee: Green Chemical Co., Ltd., Korea, Republic of

Source: Korea, Republic of CODEN: KRXXFC

Keywords: biodegradable sheet heat resistance

Patent Family

Patent Language Kind Code PatentPak Op

KR2255395 Korean B1 PDF | PDF+ | Viewer 2021-05-24

Prior Art Analysis

SciFinder[®] will search for all relevant information and send you a Prior Art Analysis based on this document. You can view the status of the request in your Recent Search History and on the History Page. You may continue to search while the analysis is processing.

Email Address: support@jaici.or.jp

検索完了を通知するメールの配信先を指定

2. 該当する検索履歴、または配信されたメールから 得られた回答を確認

November 11, 2022

検索履歴

References: Prior Art Analysis (197)

1:41 PM Biodegradable sheet with excellent heat resistance

View Results Complete

Your Prior Art Analysis is Complete

This analysis is based on the reference:

メール

Biodegradable sheet with excellent heat resistance

By: Lee, Gyu Deuk; Kim, Jong Gyun; Lee, Gyu Dong
Korea, Republic of | Korean | KR2255395

Here are the top similar documents based on your request. You can search SciFinder[®].

Biodegradable film material and method of making the same

By: Wu, Sheng-Yan; Xie, Feng-Jia; Zhong, Yuan-Fu; Xiao, Yao-Gui
Taiwan | Chinese | TWI599598

Biodegradable sheet composition having good heat resistance and transparency

By: Lee, Gyu Deuk; Kim, Jong Gyun; Lee, Gyu Dong
Korea, Republic of | Korean | KR2102303

Mechanical properties and morphology of biodegradable poly(lactic acid terephthalate) blends compatibilized by transesterification

By: Lin, Shan; Guo, Wenshan; Chen, Chunyin; Ma, Jiantai; Wang, Biaoqing
Materials & Design (2022) | English

Biodegradable barrier film containing montmorillonite for food packaging

By: Lee, Seung Tae; Lee, Won Jae; Lee, Seong Min
Korea, Republic of | Korean | KR2149518

Preparation of polymer blends between poly(lactic acid) and poly(butylene terephthalate) as compatibilizers

By: Pivsa-Art, Weraporn; Chaiyasat, Amorn; Pivsa-Art, Sommai; Yamane, Hideki; Ohara, Hitomi
Energy Procedia (2013) | English

Showing the Top Documents

View all results in SciFinder

References from Prior Art Analysis for "Biodegradable sheet with excellent heat resistance"

Filter Behavior

Filter by Exclude

Document Type

Journal (99)

Patent (98)

Review (6)

Language

Sort: Relevance

関連度順に表示

Biodegradable film material and method of making the same

By: Wu, Sheng-Yan; Xie, Feng-Jia; Zhong, Yuan-Fu; Xiao, Yao-Gui
Taiwan, TWI599598 B 2017-09-21 | Language: Chinese, Database: CAPlus

A biodegradable film material comprises: biodegradable material is PLA (polylactic acid), PBAT (polyadipate/butylene terephthalate), and any one or more of the group consisting of PBS (polybutylene succinate) 60-70%; a food-grade agricultural waste such as starch, protein or lipid 10-30; a modifier calcium carbonate powder or magnesium citrate powder 7-29%; and an organic decomposition bacteria Bacillus amyloliquefaciens.

Prior Art Analysis でヒットした回答

Biodegradable sheet composition having good heat resistance and transparency

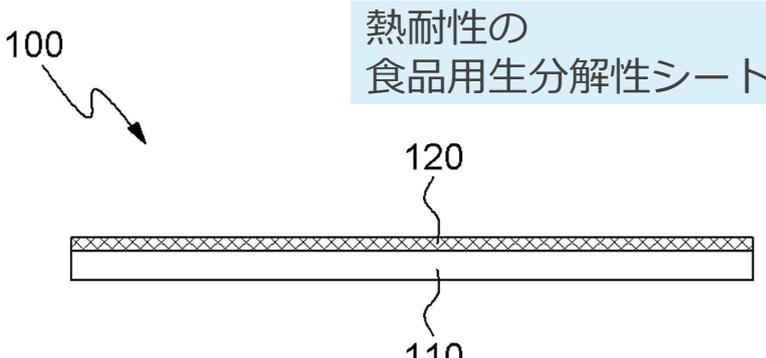
By: Lee, Gyu Deuk; Kim, Jong Gyun; Lee, Gyu Dong
Korea, Republic of, KR2102303 B1 2020-05-29 | Language: Korean, Database: CAPlus

The sheet comprises (A) an inner layer composed of polylactic acid 79-89.6, polybutylene adipate terephthalate 1-5, talc 9-15, ethylene bisstearamide 0.2-0.6, a first antioxidant 0.1-0.3, and a second antioxidant 0.1-0.3% and (B) an exterior layer composed of 90-97% of polylactic acid and 3-10% of a hydrophilic agent, wherein a thickness ratio of the inner layer and the exterior layer is 68-72:28-32.

- 回答例

Biodegradable sheet for food

Substances (2) Reactions (0) Citing (0) Citation Map Download Email Save

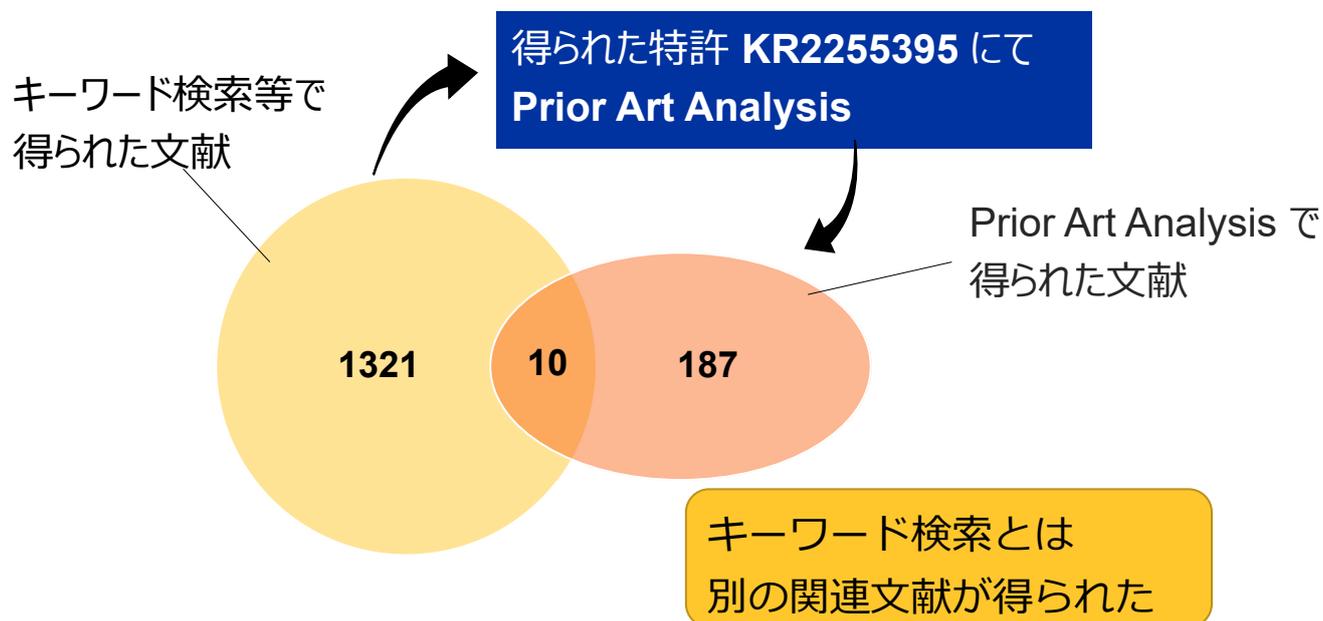
PATENT	By: Kim, Chi Gon; Jeon, Hyeong Do
Patent Number KR2021295	The sheet comprises (A) 74.5-75.5% of a base layer containing a heat-resistant biodegradable polylactic acid 96.94-97.06, a polylactic acid pellet 1.76-1.84, and titania 1.18-1.22% and (B) 24.5-25.5% of a functional layer composed of a master batch containing a polylactic acid pellet 94.9-95.1, a general polylactic acid resin 1.862-1.938, and shungite powder 0.098-0.102 parts and a carbon black master batch containing 1.764-1.836 % of a general polylactic acid and 1.176-1.224% carbon black mater batch laminated on the base layer.
Publication Date 2019-09-16	
Application Number KR2018-43241	
Application Date 2018-04-13	
Kind Code B1	
Assignee Unknown	 <p style="text-align: center;">熱耐性の 食品用生分解性シート</p>
Source Korea, Republic of CODEN: KRXXFC	

デモンストレーション②

「生分解性ポリマーの熱安定性」
をテーマとした
特許の先行技術調査を行う



キーワード検索等ではヒットしない特許が得られるケースも



Prior Art Analysis 機能のメリット

- ✓ ワンクリックで簡単に先行技術文献調査
⇒ 今すぐに先行技術文献を確認したい時におすすめ
- ✓ いつもの先行技術文献調査に "+α" のインサイトを!
⇒ 他の手法では関連文献がヒットしなかった時におすすめ



- ✓ CAS Lexicon を用いた統制語による文献調査
⇒ 主題 (統制語) を対象とした的確な検索が可能

- ✓ Prior Art Analysis 機能
⇒ ワンクリックで簡単に先行技術文献調査ができる

便利な機能を活用することで、
文献検索がより効率的に！

