2021년 7월 15일 (2021년 4호, 통권 52호)

유기화학분과 소식지

대한화학회 유기화학분과회
Http://kcsorganic.org/

2021년도 유기화학분과회 행사 일정

01 2월 4일
제 40회 유기화학분과회 심포지엄 및 정기총회
온라인

02 4월 21-23일
대한화학회 제 127회 춘계 학술대회
수원 컨벤션센터

03 6월 28-29일
제 21회 유기화학분과회 하계 워크샵
페어필드바이메리어트 송도 비치

04 **10월 13-15일**
대한화학회 제 128회 학술발표회
부산 벡스코(BEXCO)

05 12월 3일
제 247회 유기화학 세미나
추후공지

대한화학회 유기화학분과회 회원 여러분께

대한화학회 제128회 학술발표회가 부산 벡스코(BEXCO)에서 개최됩니다. 이번 학술대회에서는 3개의 심포지엄과 1개의 구두 발표, 그리고 포스터 발표가 진행될 예정입니다. 아울러 장세희 학술상 수상자의 기념 강연이 진행될 예정입니다. 각 심포지엄의 주제 및 조직 책임자는 아래와 같습니다.

[심포지엄 I] Current Trends in New Reaction and Methodology (정원진)
[심포지엄 II] Current Trends in Medicinal and Process Chemistry (김혜진)
[심포지엄 III] Current Trends in Chemical Biology and Bioorganic Chemistry (박종민)
[구두발표] Oral Presentations for Young Scholars in Organic Division (배한용)

2021년 유기화학분과회 운영진 드림

제 21회 유기화학분과회 하계워크샵

6월 28일(월)-29일(화), 부산 송도에 위치한 페어필드바이메리어트 송도 비치에서 **제21회 유기화학분과회 하계워크샵**이 개최되었습니다. 2019년 이후 처음 가지는 모임이어서 이번에는 가능한 많은 분께 짧게나마 발표 기회를 드리고자 기획하였습니다. 코로나 상황으로 인해 부득이 학생회원들의 동반 참석은 내년으로 기약하고 PI급만 참석하여 두 개의 세션으로 나누어 발표를 진행하였습니다. 41명의 회원께서 발표하시는 관계로 충분한 질의/응답 시간을 가질 수는 없지만 대신 배부되는 피드백 용지에 코멘트 등을 적어 각 발표자분께 전달해 조금이라도 알찬 도움을 드리고자 하였습니다. 특히 올해 젊은 유기화학자상 시상식 및 수상강연은 온라인을 통해 동시 송출하여 회원님 및 소속 연구실 대학원생들이 참여하실 수 있도록 하였습니다. 이번 하계워크샵이 유익한 학술교류의 장이 되며 또한 짧지만 즐거운 시간으로 만들어 주신 모든 유기분과회 회원님들의 적극적인 참여에 깊이 감사 말씀을 드립니다.

또한 하계 워크샵을 준비하고 진행하는데 재정적으로 후원을 해주신 **㈜세진씨아이, 대정화금, BK 인스트루먼트(BKI), 보로노이바이오 / B2SBio, 브루커코리아㈜, 사이플러스, ㈜수림교역, 써모피셔 사이언티픽, 씨엔티 코리아, 알토스 (분석기기회사), 이우과학교역, 인터테크놀로지스, 자유아카데미, 큐라켐, 한국도레이과학진흥재단, 한국화합물은행, 서울대 이철범 교수 연구실**과 회원님들께 깊은 감사를 드립니다.

제 21회 유기화학분과회 하계워크샵

❖ 유기분과 회장 인사 말씀 (온라인 & 오프라인 동시 진행)

❖ 제10회 젊은 유기화학자상 시상식 및 수상 강연 (온라인 & 오프라인 동시 진행)

김민 (충북대학교) 회원의 젊은 유기화학자상 수상을 진심으로 축하드립니다!

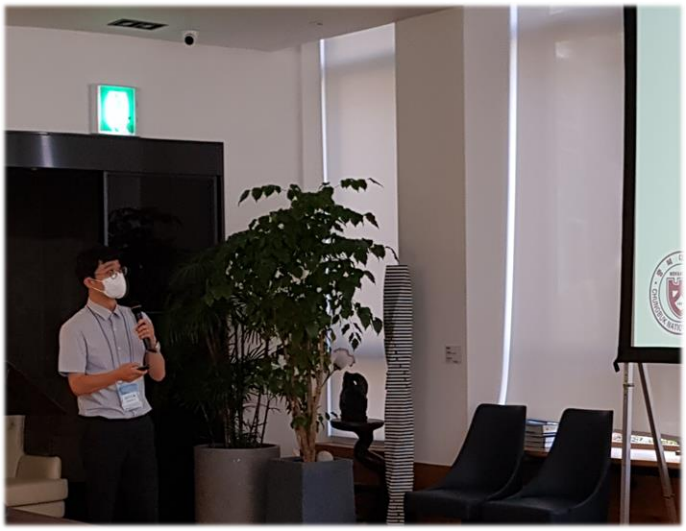
제 21회 유기화학분과회 하계워크샵

❖ 제1 강연장 (2층)

Session I **기정민** (UNIST), **정병혁** (DGIST), **이충환** (가천대), **임창수** (아주대), **이효준** (군산대), **김범진** (울산대), **이상기** (이화여대)

Session II **장영태** (POSTECH), **김기태** (충북대), **우상국** (울산대), **손종우** (동아대), **정시원** (목포대), **김재현** (강원대), **홍성유** (UNIST)

Session III **류도현** (성균관대), **김인수** (성균관대), **장혜영** (아주대), **조우경** (충남대), **임희남** (영남대), **강경태** (경희대), **홍석원** (GIST)



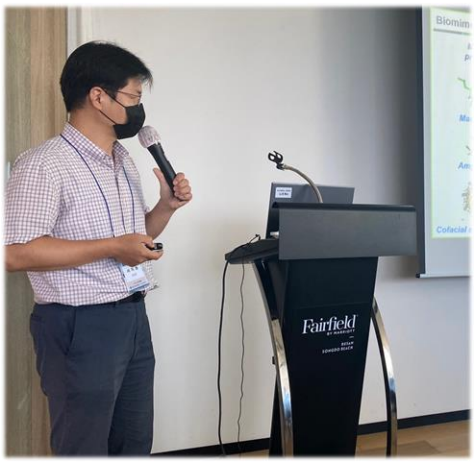
제 21회 유기화학분과회 하계워크샵

❖ 제2 강연장 (22층)

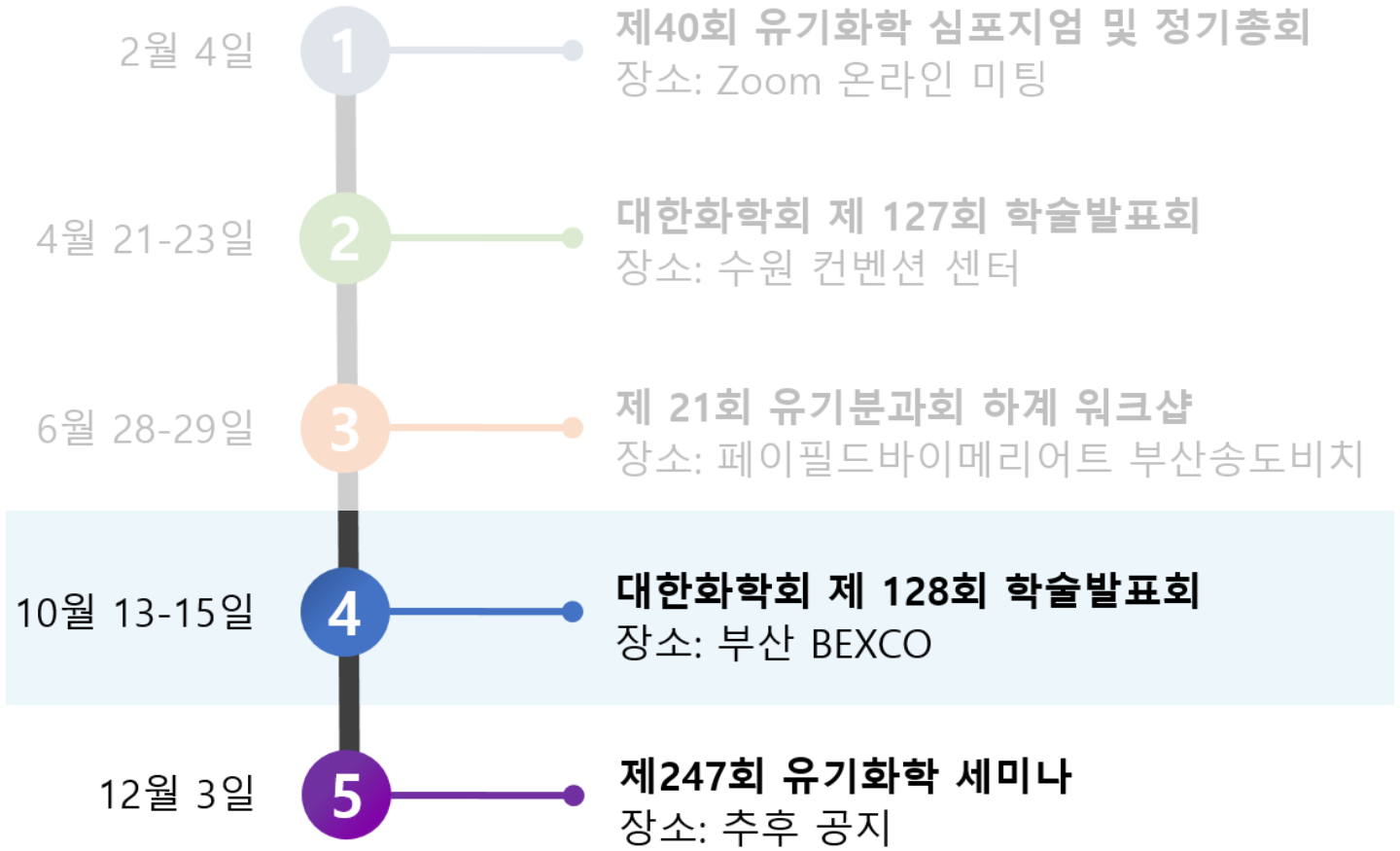
Session I **이준석** (고려대), **김현우** (이화여대), **이원철** (강원대), **한지훈** (안동대), **서성은** (아주대), **이민재** (군산대), **김병문** (서울대)

Session II **이용록** (영남대), **강호웅** (충남대), **손정훈** (충남대), **김용주** (고려대), **김도경** (경희대), **신광민** (성균관대), **Satish Balasaheb Nimse** (한림대)

Session III **홍승우** (KAIST), **서지원** (GIST), **유은정** (경희대), **이윤미** (광운대), **홍대화** (부산대), **송충의** (성균관대)



대한화학회 제 128회 학술발표회 참석 안내



[대화학회 제 128회 학술발표회]

대한화학회 제128회 학술발표회가 부산 벡스코(BEXCO)에서 개최됩니다. 이번 학술대회에서는 3개의 심포지엄과 1개의 구두 발표, 그리고 포스터 발표가 진행될 예정입니다. 아울러 장세희 학술상 수상자의 기념 강연이 진행될 예정입니다. 각 심포지엄의 주제 및 조직 책임자는 아래와 같습니다.

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- [구두발표] Oral Presentations for Young Scholars in Organic Division (배한용)

공지사항

분과회비 납부 안내

유기화학분과회 연회비는 3만원입니다. 분과회비 납부방법은 아래와 같습니다.

1. 대한화학회 홈페이지를 통한 납부

대한화학회 홈페이지에 로그인 후, 바로가기 서비스의 분과회비 납부를 선택하시면 됩니다. 납부방법으로 신용카드, 계좌이체, 또는 무통장 입금이 선택 가능합니다. 결제 후 증빙서류는 본인이 직접 출력 하실 수 있습니다.
(결제 페이지 http://new.kcsnet.or.kr/pay_select, 로그인 후 사용 가능)

2. 현장결제

유기화학분과회 행사(분과회 총회, 하계 워크샵 및 유기화학세미나) 시 현금으로 직접 결제 가능합니다. 결제 후 증빙서류로 유기화학분과회 회장 명의의 간이 영수증이 발행됩니다.

3. 계좌이체

유기화학분과회 운영계좌로 이체도 가능합니다 (우체국, 503656-02-159286, 예금주:이선우). 이체 시 보내신 분의 성함 혹은 핸드폰 번호를 반드시 남겨주시고, 김은경 실장님께 이메일 (jesus6294@hanmail.net)로, 1) 성함, 2) 소속, 3) 이메일, 4) 핸드폰번호를 보내주시기 바랍니다. 증빙이 필요하신 경우, 유기화학분과회 회장 명의의 간이 영수증이 발행됩니다.

납부자 명단 (2021년 7월 12일 기준, 160명 납부)

Jean Bouffard	강경태	강동진	강성민	강은주	강택	강호웅	고민섭	고혜민	공영대
곽재성	권선범	권용석	권용억	권용훈	권태혁	금교창	기정민	김기태	김도경
김민	김범진	김병문	김병선	김병수	김상희	김성희	김성곤	김성국	김연수
김영미	김용주	김원석	김윤경	김은하	김재녕	김재현	김정곤	김주현	김지민
김진호	김철재	김태정	김필호	김학중	김현우 (KAIST)	김현우 (이화여대)	김환명	김훈영	김희권
류도현	문봉진	민선준	박보영	박성준	박정수	박종민	박종운	박지훈	박찬필
박철민 (UNIST)	방은경	백무현	서성용	서성은	서지원	손정훈	손종우	송창식	송충의
신광민	신승훈	신인재	심재호	심태보	안덕근	안양수	양시경	양정운	오경수
오종훈	우상국	유은정	유자형	윤소원	윤재숙	윤정인	윤주영	윤창수	윤효재
이강문	이광호	이기성	이기연	이덕형	이동환	이민희	이선우	이성기	이성호
이송이	이안나	이안수	이용록	이원철	이윤미 (광운대)	이윤미 (연세대)	이은성	이은지	이인환
이재인	이정규	이준석	이준희	이충환	이필호	이현수	이희봉	이희윤	임상민
임지우	임창수	임현석	임희남	장두옥	장석복	장영태	장우동	장혜영	전병선
전철호	정병혁	정시원	정원진	조동규	조승환	조우경	조은진	조창우	조천규
주정민	지형민	천철홍	최기항	최성욱	최태림	추현아	하현준	한서정	한순규
한지훈	허정녕	홍대화	홍석원	홍성유	홍순혁	홍승우	홍종인	황길태	황승준

공지사항

뉴스레터 발행 안내

2021년도 유기화학분과회 뉴스레터는 격월(홀수 달)로 발행됩니다. 뉴스레터에는 유기분과 회원들의 소식이나 학술대회 및 세미나 안내 및 참가 후 소감, 만평 등 유기화학분과회 활동과 관련된 다양한 소식들을 수록하고자 합니다. 회원님들 주위에 작은 소식들을 알고 계시면 분과회 운영위원에게 연락주시길 바랍니다. 소식들은 분과 모든 회원들과 공유하도록 하겠습니다. 유기화학분과회 뉴스레터는 분과회원들에게 e-mail 로 보내드리고 있으며, 유기화학분과회 홈페이지 게시판에도 공지가 될 예정입니다. 회원 여러분들의 관심과 적극적인 뉴스 제보를 부탁 드립니다. (담당: 이민희(숙명여대) 회원, minheelee@sookmyung.ac.kr)

- 대한민국을 빛낸 유기화학자: 2020년 유기분과 소식지에서 게재하였던 올해도 이어서 진행. (A4 한 장 분량, 게재를 원하시는 회원(지인 또는 제자 등) 이 직접 원고 작성)
- 국내 연구 동향 및 연구실 소개: 최근에 회원들의 그룹에서 발표한 논문을 회원이 직접 소개 (A4 한 장 분량, 연구실 사진, 연구 요약, 대표업적, 최근 우수 연구 결과 소개)
- 회원들과 연관된 소식들: 학회, 연구비 신청, 홍보, 수상 등
- 신입 회원 소개

동학 불코(Bull. Korean Chem. Soc.) 캠페인

2021년도 대한화학회 유기분과에서는 대한화학회 학술지(Bulletin of the Korean Chemical Society; BKCS)의 Impact Factor 향상을 위해서 동학 불코 캠페인을 진행하고 있습니다.

지난 뉴스레터 1월호에 이어 3월호에서도 지난 2년간 BKCS에 발표된 유기분야 관련 논문과 연구분야를 정리하여 소식지 뒤부분에 실었습니다. 뿐만 아니라, BKCS 특별호(special issue on "Chemical Synthesis & Reaction Development") 에 실린 논문의 graphic abstract를 첨부하였습니다. 또한 BKCS 표지가 2021년 2월부터 바뀌었으며, 3월호, 6월호 cover graphic으로 김민 회원(충북대), 홍석원 회원(GIST)께서 발표하신 논문이 선정되었습니다. 유기분과 회원분들이 발표하시는 논문에서 BKCS 발표 논문을 1년에 2-3번 정도만 인용하신다면 2년 후 BKCS Impact Factor가 많이 올라 갈수 있으리라 기대합니다. 회원님들의 많은 관심과 참여를 적극 부탁드립니다!

홈페이지 회원 정보 수정

유기화학분과회는 홈페이지를 운영하고 있습니다(http://kcsorganic.org/).
신입 회원은 회원 가입하셔서 연락 정보를 입력해 주십시오. 이메일, 전화번호, 연구실 홈페이지 등의 개인정보 수정은 회원님께서 로그인 후 my page에서 직접 하실 수 있습니다.
(홈페이지 담당: 한국화학연구원 곽재성 운영위원, jkwak@krict.re.kr)

공지사항

광고 및 후원 모집

유기화학분과회의 안정적인 운영을 위하여 광고업체 및 후원 연구실을 모집하고 있습니다. 매월 발행되는 뉴스레터에 기업체 광고 및 연구실 홍보 페이지를 수록 예정이며 기업 광고의 경우 유기화학분과회 홈페이지 하단의 배너광고를 무료로 제공하고 있습니다. 회원 여러분께 광고 및 후원 홍보에 대한 협조를 부탁 드립니다.
(광고 및 후원 담당: 전남대 이선우 총무 부회장, sunwoo@chonnam.ac.kr)

외부 시상 안내

아래와 같이 유기화학분과 회원들이 지원할 수 있는 여러 상이 있습니다. 시상 내역과 시행시기 확인 후 적극적인 추천과 지원을 통해 많은 회원들이 수상할 수 있기를 바랍니다.

번호	외부 시상명	주관단체 (웹사이트)	시행시기	
			후보 추천	시상식
1	**올해의 여성과학기술자상(이학)**	한국여성과학기술인지원센터 www.wiset.or.kr	당해년도 7월	당해년도 12월
	▲국내에서 활동하는 한국인 및 한국계 여성 과학기술자로 국가과학기술 발전에 크게 기여한 자			
2	**삼일문화상 학술상(자연과학분야)**	삼일문화재단 http://www.31cf.or.kr/	당해년도 8월	차년도 3월
	▲자연과학분야에서 창의성을 발휘하여 연구, 저작, 발표를 계속하고 획기적인 업적을 이룩한 자로 누적된 업적과 최근 5년간의 업적을 감안하여			
3	**올해의 과학교사상**	한국과학창의재단 http://www.kofac.re.kr	당해년도 8월	당해년도 12월
	▲과학, 수학교육 및 과학문화 확산에 기여한 중,고등학교 과학,수학교사 및 초등학교 교사 (5년 이상 재직)			
4	**한국공학한림원 포상 (대상, 젊은공학인상, 일진상, 해동상)**	한국공학한림원 https://www.naek.or.kr	당해년도 8월	당해년도 12월
	▲공학과 관련된 경영, 기술, 교육 및 연구의 부문에서 대한민국의 산업 발전에 크게 기여한 공학인 및 기술인 (특히 한국공학한림원 대상 및 젊은			
5	**포스코(청암과학상)**	포스코 청암재단 www.postf.org	당해년도 6월	차년도 4월
	▲자연과학과 공학분야에서 창의적인 연구업적을 이룩한 인사			
6	**한국과학상**	한국연구재단 www.nrf.re.kr	당해년도 8월	당해년도 12월
	▲이학분야에서 자연현상의 주요원리를 규명하여 세계정상 수준의 탁월한 연구업적을 이룩한 과학자			
7	**대한민국과학문화상(과학문화창달분야)**	한국과학창의재단 http://www.kofac.re.kr	당해년도 9월	당해년도 12월
	▲과학 문화 : 다양한 과학 활동으로 과학문화발전에 기여한 자			
8	**호암상(과학상)**	호암재단 www.hoamprize.org	당해년도 10월	차년도 6월
	▲기초과학 분야에서 탁월한 연구 업적을 이룩한 인사			
9	**수당상**	수당재단(기초과학분야) www.samyang.com	당해년도 12월	차년도 5월
	▲기초과학 분야에서 훌륭한 연구업적을 이룩한 인사			
10	**대한민국학술원상**	대한민국학술원 http://www.nas.go.kr	당해년도 11월	차년도 9월
	▲대한민국 국민으로서 학술연구 또는 저작이 매우 우수하여 학술발전에 현저한 공로가 있다고 인정된 자			

신입회원 소개

김재현 (Jae Hyun Kim)

강원대학교 조교수
Email: jh.kim@kangwon.ac.kr
2020.9-현재: 강원대학교 약학대학 약학과
2019.10-2020.08: 서울대학교 약학대학, postdoc (지도교수: 김상희)
2018.09-2019.08: University of Florida, postdoc (지도교수: Daniel Seidel)
2017.03-2018.08: 서울대학교 약학대학, postdoc (지도교수: 김상희)
2010.03-2017.02: 서울대학교 약학대학, M.S., Ph.D. (지도교수: 김상희)
2006.03-2010.02: 서울대학교 약학대학, B.S.

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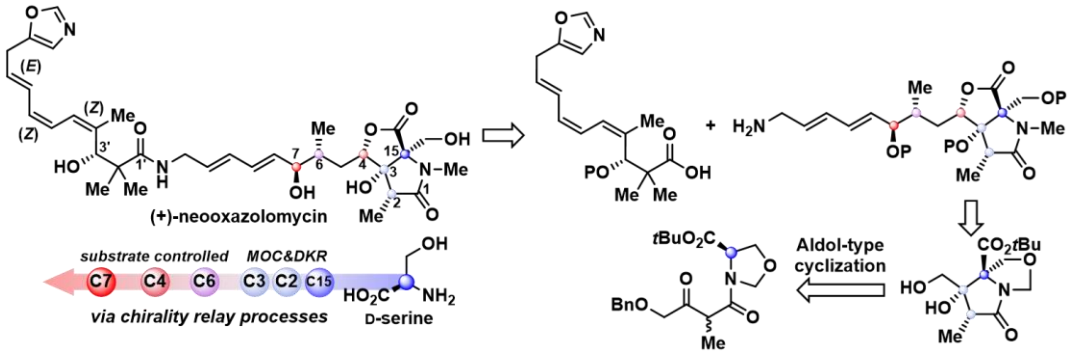
Asymmetric Total Synthesis of (+)-Neooxazolomycin Using a Chirality Transfer Strategy

Jae Hyun Kim et. al. *Angew. Chem. Int. Ed.* **2019**, *58*, 11018–11022.



Neooxazolomycin은 oxazolomycin 계열의 천연물로 1985년 분리·보고되었다. 그 구조적 특이성과 생물학적 활성에 따라 oxazolomycin 계열 화합물에 대한 합성들이 다양하게 시도되었지만 그들에 대한 전합성은 많이 보고되지 않았다. 본 연구에서는 neooxazolomyin의 비대칭 전합성을 최소한의 chirality source로부터 완료하였다. Amide 결합을 중심으로, 오른쪽 fused bicyclic system과 여섯개의 입체중심은 D-serine으로부터 'memory of chirality' (MOC) 와 'dynamic kinetic resolution' (DKR) 이 적용된 aldol reaction, chirality 전이 전략을 통해 입체선택적으로 구축하였다. 왼쪽의 (*Z*,*Z*,*E*)- oxazole triene은 전이금속 촉매 반응을 통해 입체선택적으로 합성하였으며, 준비된 오른쪽, 왼쪽 부분의 결합을 통해 neooxazolomycin의 전합성을 완료하였다.

신입회원 소개

이기성 (Giseong Lee)

국민대학교 조교수
Email: gsrecall@kookmin.ac.kr
2021.3-현재: 국민대학교 교양학부
2020.09-2021.02: 한림대학교 화학과 응용화학연구소, Post. Doc.
2012.03-2020.08: 고려대학교 화학과, Ph.D. (지도교수: 한호규)
2009.11-2011.05: ㈜ ISCHEM, 주임
2001.03-2010.08: 건국대학교 글로컬캠퍼스 응용화학과 졸업

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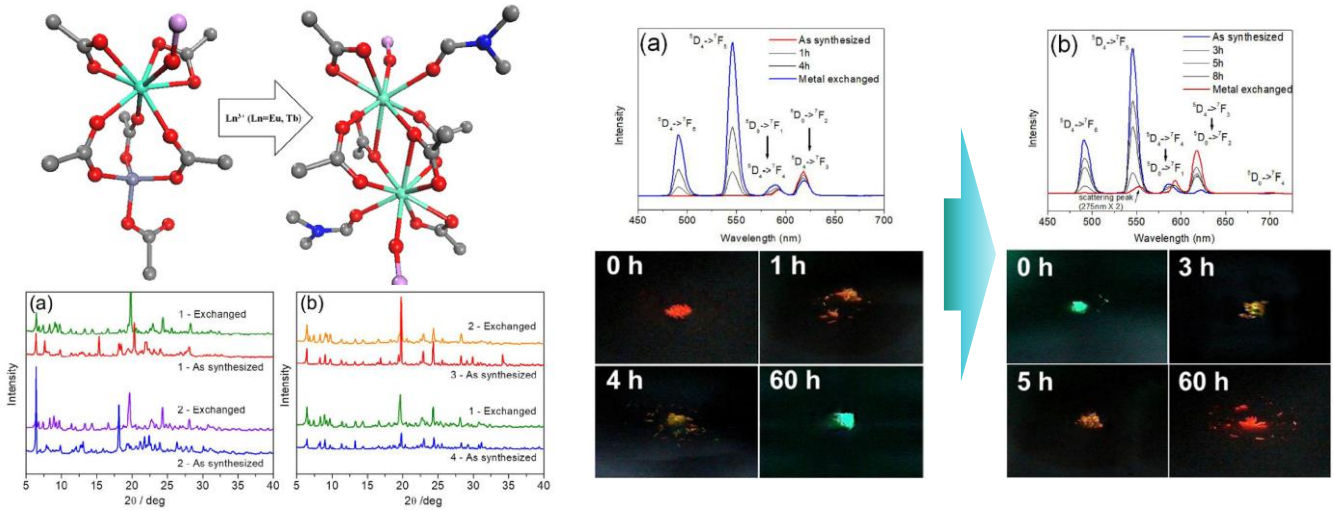
Conversion from Heterometallic to Homometallic Metal–Organic Frameworks

Giseong Lee et. al. *Chem. Eur. J. 2020, 26, 11767–11775*



두 개의 새로운 리간드 (H_3TPO=tris(4-carboxyphenyl)phosphine oxide) 및 동종 금속 (Ln^{3+}, Zn^{2+})을 조합하여 새로운 MOFs (LnZnTPO, LnTPO)를 합성하고 그 구조와 특성을 분석하여 구조 내 금속의 전환으로 인한 광학적 특성 변화를 연구하였다.

국내 연구 동향 _ 연구실 소개

Catalysis Research Laboratory [성균관대학교 양정운 교수 연구실]

양정운 (Jung Woon Yang)

성균관대학교 에너지과학과 정교수
Email: jwyang@skku.edu
Tel: 031-299-4276
홈페이지: https://shb.skku.edu/catalysis/

1. Rhee, H.-J.; Ranjith, J.; Byeon, H.; Ha, H.-J.*; Yang, J. W.* 'Preparation and Utilization of Contiguous Bisaziridines as Chiral Building Blocks' *Adv. Synth. Catal.* **2021**, Early View [DOI: 10.1002/adsc.202100335].
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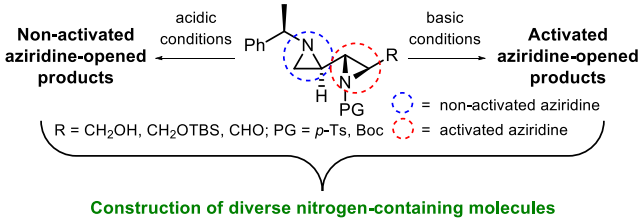
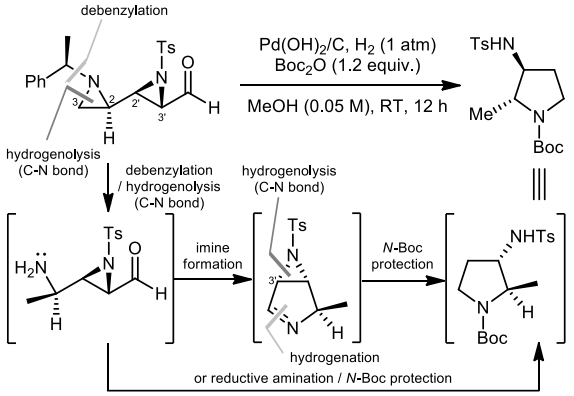
본 연구실에서는 (비대칭) 유기촉매반응을 비롯하여 협동촉매반응, 전합성, 바이오매스 전환 그리고 유기배터리 개발에 이르기까지 다양한 주제로 연구를 진행하고 있으며, 특히 생분해성 바이오 플라스틱인 폴리에틸렌 퓨라노에이트 (**p**oly**e**thylene **f**uranoate, PEF)의 주요 원료인 2,5-퓨란다이카복실산과 나일론 6,6의 원료인 아디프산에 대한 상업적인 공정 개발 연구에 역점을 두고 있습니다.

Preparation and Utilization of Contiguous Bisaziridines as Chiral Building Blocks

Jung Woon Yang *et al. Adv. Synth. Catal.* **2021**, Early View. DOI: 10.1002/adsc.202100335





질소를 포함한 삼각 고리인 아지리딘는 아지노마이신으로 대표되는 항암 또는 항생제와 같은 약리학적 활성을 가진 100여종 이상의 알칼로이드에서 주요 골격으로 발견됩니다. 아지리딘 질소에 부착된 특정 치환기에 따라 아지리딘은 활성 및 비활성화된 아지리딘으로 세분화 될 수 있습니다. 예를 들어, 질소에 전자끌게 치환체인 설포닐, 포스포닐 또는 카보닐기를 갖는 아지리딘은 '활성화된 아지리딘'이라고 하며, 반면 알킬기와 같은 전자공여체를 갖는 아지리딘은 '비활성화된 아지리딘'이라고 명합니다. 전자인 경우에는 염기성 조건에서 다양한 친핵체와 쉽게 반응하여 고리 열림 생성물을 제공하고, 후자인 경우에는 높은 수율을 갖는 고리 열림 생성물을 얻기 위해서는 양성자 종 또는 루이스 산과 같은 적절한 활성화제로 사전 활성화 단계가 필요합니다. 이와 같이 상이한 반응성을 갖는 인접한 비스아지리딘 화합물을 자리선택적 고리 열림 반응에 적용하면 최소 두개의 질소가 포함된 다양한 카이랄성 유기 분자를 손쉽게 합성할 수 있을 뿐만 아니라 복잡한 분자 합성 시 핵심 전구체로 사용될 수 있습니다. 인접한 카이랄 비스아지리딘을 $Pd(OH)_2/C$, H_2, Boc_2O 조건에서 반응을 진행하게 되면 탈벤질화 반응과 덜 치환된 3-탄소와 질소간의 수소화분해반응을 통해 첫번째 고리 열림 반응이 일어나고, 생성된 유리 아민은 인접한 알데하이드와 반응하여 이민을 형성하게 됩니다. 동일한 수소화(분해)반응 조건하에서 3'-탄소와 질소 결합의 선택적 절단을 통해 두번째 고리 열림 반응이 일어나며, 연속적인 이민의 수소화반응 그리고 피롤리딘의 질소에 Boc그룹을 도입하게 되면 다치환된 카이랄 피롤리딘을 고수율/고선택적인 방법으로 합성할 수 있게 됩니다.

국내 연구 동향 _ 연구실 소개

유기 반응 및 물질 개발 연구실 [부산대학교 주정민 교수 연구실]

주정민 (Jung Min Joo)

부산대학교 화학과 부교수
Email: jmjoo@pusan.ac.kr
Tel: 051-510-2239
https://sites.google.com/view/jmjoogroup

1. Padhi, B.; Kang, G.; Kim, E.; Ha, J.; Kim, H. T.; Lim, J.; Joo, J. M., Pd-Catalyzed C–H Annulation of Five-Membered Heteroaryl Halides with Norbornene Derivatives. *ACS Catal.* **2020**, *10*, 1792-1798.

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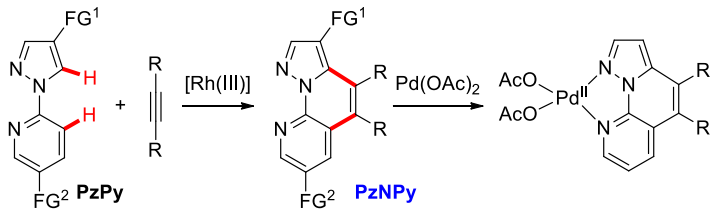
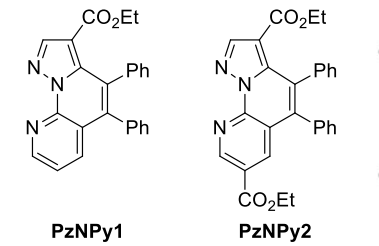
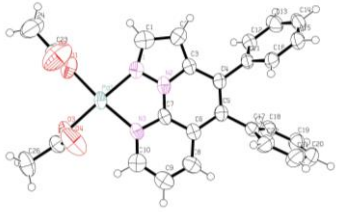
3. Jang, J. H.; Ahn, S.; Park, S. E.; Kim, S.; Byon, H. R.; Joo, J. M., Synthesis of Redox-Active Phenanthrene-Fused Heteroarenes by Palladium-Catalyzed C–H Annulation. *Org. Lett.* **2020**, *22*, 1280-1285.

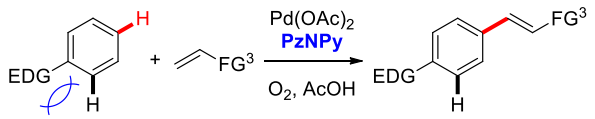
저희 연구실은 새로운 유기 저분자 디자인을 통해 반응 및 물질을 개발하고 있습니다. 구체적으로 전자적/입체적 성질을 고려하여 새로운 리간드를 합성해서 C–H 작용기화 반응 등 전이금속촉매 반응을 개발하고 있습니다. 또한, 새로운 유기 레독스-활성 분자 디자인을 통해 산화/환원 후 안정한 분자를 개발하여 에너지 저장 및 전자 전달 매개체로 응용하고 있습니다.

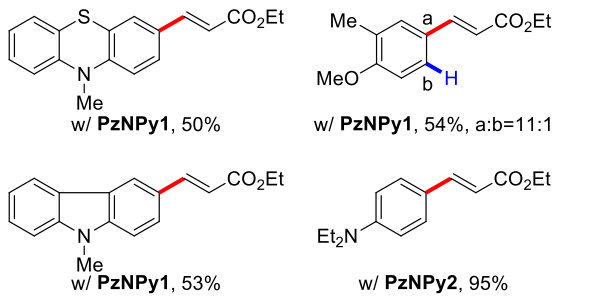
Synthesis of Bidentate Nitrogen Ligands by Rh-Catalyzed C–H Annulation and Their Application to Pd-Catalyzed Aerobic C–H Alkenylation Hyun Tae Kim,‡ Eunsu Kang,‡ Minkyu Kim, Jung Min Joo, *Org. Lett.* **2021**, *23*, 3657-3662, DOI: 10.1021/acs.orglett.1c01040











저희 연구실에서는 형태적으로 고정된 세고리 질소 리간드 디자인을 통해 방향족 화합물의 위치선택적인 C–H 알켄화 반응을 개발하였습니다. Rh 촉매 C–H 접합고리화 반응을 이용해 피리딘보다 약하게 배위하는 피라졸을 포함하는 접합 헤테로고리 **PzNPy** 리간드 시리즈를 합성하였습니다. 모듈러 방식을 통해 전자적/입체적으로 성질이 다른 리간드 라이브러리를 구축하여 반응하고자 하는 방향족 화합물의 성질에 맞춰 가장 전자가 풍부한 자리의 C–H 결합을 치환하여 알켄기를 도입할 수 있었습니다. 또한, 기존의 유사한 반응이 당량의 금속 산화제를 사용하는 것에 반해, 산소를 산화제로 사용하여 친환경적인 반응이 가능했습니다. 현재는 다른 방향족 화합물 및 다른 종류의 반응으로 리간드를 적용하고 있는 중입니다. 관심있는 리간드가 있으시면 연락주십시오~!

동학 불코(Bull. Korean Chem. Soc.) 캠페인

2021년도 대한화학회 유기분과에서는 대한화학회 학술지(Bulletin of the Korean Chemical Society; BKCS)의 Impact Factor 향상을 위해서 동학 불코 캠페인을 진행하고 있습니다. 지난 1월호 뉴스레터에 이어 7월호에서도 지난 2년간 BKCS에 발표된 유기분야 관련 논문과 연구분야를 정리하여 소식지 뒤부분에 실었습니다. 뿐만 아니라, BKCS 특별호(special issue on "Chemical Synthesis & Reaction Development")에 실린 논문의 graphic abstract를 첨부하였습니다. 또한 BKCS 표지가 2021년 2월부터 바뀌었으며, 3월호 cover graphic으로 김민 회원(충북대)께서 발표하신 논문이 선정되었습니다. 유기분과 회원분들이 발표하시는 논문에서 BKCS 발표 논문을 1년에 2-3번 정도만 인용하신다면 2년 후 BKCS Impact Factor가 많이 올라 갈수 있으리라 기대합니다.

유기화학 분야 BKCS 발표 논문 리스트 (2019. 1 이후)

연번	게재연월	연구분야	키워드	논문 제목	교신저자
1	2019-01	Org. Synthesis	Reboxetine; Diastereomer; Tandem reaction; One-pot	Synthesis of (S,S)-Reboxetine	고수영
2	2019-01	Org Rxn - Zn	Active zinc; Hydrosilylation; Reduction of aldehyde; Ligand-free Silanes	Ligand-Free Hydrosilylation of Aldehydes Mediated by Highly Active Zinc Metal	김승회
3	2019-01	Org. Photovoltaics	Organic photovoltaic cell; Organic photovoltaics; Non-fullerene acceptor; Barbituric acid	Non-fullerene Small Molecule Acceptors Containing Barbituric Acid (BAR) End Groups for Use in High-Performance OPVs	임은희
4	2019-01	Org Rxn - BuLi Cat.	Catalyzed hydroboration; n-Butyllithium; Aldehydes and ketones; Pinacolborane	n-Butyllithium (1 mol%)-catalyzed hydroboration of aldehydes and ketones with pinacolborane (HBpin)	안덕근
5	2019-01	PET Film	PET; Photochemical reaction; SI-ARGET ATRP; Non-specific binding	Developing Low Fouling on PET Film via Surface-Initiated ARGET ATRP of Carboxybetaine under Air Condition	홍대화
6	2019-01	Org Rxn-Cyclization	Thioaurones; Condensation; Debenzylation; 5-Exo cyclization	Novel Synthesis of Thioaurones by the Regioselective Cyclization of 1-(2-Benzylthio)phenyl-3-phenyl-2-propyn-1-ones Derived from Thiosalicylic Acid	이재인
7	2019-01	Polymerization	Thermally expandable microspheres; Cinnamonitrile; Diethyl fumarate; New crosslinking agent	Suspension polymerization of thermally expandable microspheres using cinnamonitrile and diethyl fumarate as crosslinking agents	안덕근
8	2019-01	Bio	Inflammation; 3,6-dihydroxyflavone; TLR1 TLR2 Antagonist	3,6-dihydroxyflavone: A potent inhibitor with anti-inflamatory activity targeting Toll like receptor 2	김양미
9	2019-02	Org. Rxn-Microwave	9H-Carbazole; H/D exchange; Microwave; Organic light-emitting material; 2-Phenylpyridine	Microwave-assisted efficient H/D exchange method of 9H-carbazole and 2-phenylpyridine as organic light emitting materials.	임춘우
10	2019-02	Medi & Life	Neural stem cell Astrocyte; Small molecule; Chirality; 1,3,4-oxadiazine	Novel Chiral 1,3,4-Oxadiazole Derivatives Inducing Astrocyte Differentiation of Rat Fetal Neural Stem Cells	민경훈
11	2019-02	Photonic Switch	Photonic switch; Aluminum; Morpholino-anthracene; Combinational photonic logic circuit; Image-guided fluorogenic tracking	Al^{3+}-morpholine-appended anthracene ensemble as a dual photonic switch for H2PO4- and CN- ions and its biological applications	김홍석
12	2019-02	Fluorescent Probe	Excited-state intramolecular hydrogen transfer; Intramolecular charge transfer; Dansyl-thiazole conjugate; Cu^{2+} I^-	Highly selective fluorescent probe based on 2-(2'-dansylamidophenyl)thiazole for sequential sensing of copper(II) and iodide ions	김홍석
13	2019-02	Organo Catalyst	Carbon dioxide; Mild condition; Guanidinium ; Organocatalyst	Guanidinium-based organocatalyst for CO2 utilization under mild conditions	김해조
14	2019-02	Org Photovol Cell	Porphyrin; band gap; organic photovoltaic cell	Synthesis and Band Gap Analysis of Designed Porphyrin Derivatives Containing Electron Donating and Accepting Group	황광진
15	2019-03	Synth. Method	Vilsmeier–Haack reaction; N-(1-chlorovinyl)formamide; Z/E isomers 2-phenoxyethanamide derivatives; Regioselective	Synthesis of E/Z N-(1-chlorovinyl)formamide using Vilsmeier-Haack reaction	신동수
16	2019-03	Synth. Method	SiO_2-based condensation; β-enamino ester; 4-hydroxypyridine-2(1H)-one	Silica gel mediated synthesis of β-enamino esters and its application for the synthesis of indeno 4-hydroxypyridin-2(1H)-ones	송민수

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연번	게재연월	연구분야	키워드	논문 제목	교신저자
17	2019-03	Synth.-Alkylation	Tetrahydroisoquinoline; methopholine homolaudanosine; dysoxyline	Succinct syntheses of methopholine, (±)-homolaudanosine, and (±)-dysoxyline via metal-free one-pot double alkylation on 1-methyl-3,4-dihydroisoquinolines	김필호
18	2019-03	Polymerization	Poly(α-olefin); Cationic polymerization; Aluminum chloride; Lubricant	Studies on Poly α-Olefin Synthesis by AlCl3 Catalyzed Cationic Polymerization: Concentration Effect on Molecular Weight and Viscosity	김정곤
19	2019-04	Recognition-Anions	Dihydrogen phosphate; selective anion receptor; C-H hydrogen bonds; Polarization of C-H bond	Differential Recognition of Various Anions Utilizing Aromatic C-H Hydrogen Bonding	강종민
20	2019-04	Polymerization	Graft-polymerization; Polystyrene; Polyurethane	The graft-polymerization of polystyrene using 3-isopropenyl-α,α-dimethylbenzyl isocyanate onto polyurethane to modify the tensile and shape memory characteristics	전병철
21	2019-05	Copper Catalysis	Modified chitosan; Biopolymer; Copper-catalyzed ipso-hydroxylation; Arylboronic acids	Chemically Modified-Chitosan as a Biopolymer Support in Copper-Catalyzed ipso-Hydroxylation of Arylboronic Acids in Water	김승회
22	2019-05	Org. Photovoltaic	Organic photovoltaics; Organic solar cell; Nonfullerene; Rhodanine; Barbituric acid	A Nonfullerene Acceptor Containing Rhodanine and Barbituric Acid End Groups for Use in Organic Photovoltaic Devices	임은희
23	2019-05	Nanophotosensitizer	Photodynamic therapy; Nanophotosensitizer; Chlorine6; CD44 Redox-sensitive	Redox and CD44 dual-responsive nanophotosensitizer composed of chlorin e6-conjugated hyaluronic acid via disulfide linkage for targeted photodynamic treatment of cancer cells	정영일
24	2019-05	Cross Coupling	Indazole; Diversity; microwave; Transition metal; Coupling reaction	Microwave-assisted transition metal-catalyzed coupling approach to indazole diversity	염을균
25	2019-06	pH Sensing	Covalent immobilization; Ratiometric pH sensor; Fluorescent membrane; Low pH value	A Fluorescent Optode Membrane Covalently Immobilized with a Donor-Acceptor Conjugated Dye for pH Sensing under Extremely Acidic Conditions	김형진
26	2019-06	Hetero Pd Catalyst	Noncovalent immobilization; Heterogeneous catalysis; Palladium; Suzuki reaction	Noncovalent immobilization of palladium complex onto reduced graphene oxide: A highly efficient and recyclable catalyst for Suzuki reaction	진명종
27	2019-06	Medicinal Chem	Farnesyl acetone derivatives; Anti-platelet aggregation; Blood circulation; Marine natural product	Synthesis of substituted farnesyl acetone derivatives and their inhibitory activity against platelet aggregation	이석준
28	2019-06	Fluorescent probe	Fluorescent probe; Acrylamide-based Michael addition; Photo-induced electron transfer; Cysteine; Homocysteine	Acrylamide-coumarin-benzaldehyde as a turn-on fluorescent probe providing an enhanced water solubility for detection of cysteine and homocysteine	이민희
29	2019-06	Medicinal Chem	Tryptamine–triazole hybrid compounds; Cholinesterase inhibitory activity; Alzheimer's disease; Molecular docking calculation; Molecular dynamics simulation	Tryptamine-Triazole Hybrid Compounds for Selective Butyrylcholinesterase Inhibition	박정호
30	2019-06	Organo Catalyst	Friedel–Crafts reaction; Furan; Sulfamidate; Phosphoric acid; Organocatalysis	Asymmetric Phosphoric Acid-Catalyzed Aza-Friedel–Crafts Reaction of Furan with Cyclic N-Sulfimines	김성곤
31	2019-06	Pd Catalysis-Heck	Decarboxylative coupling; Heck reaction Vinyl sulfide; Acrylic acid	Decarboxylative Heck-Type Reactions of Thioacrylic Acid with Aryl Bromides	이선우
32	2019-07	Bio Synthesis	chiral compound; glycerol derivative; hydroxycinnamic acid	Biological synthesis of chiral p-coumaroyl glycerol	안중훈
33	2019-07	Aromatic-Hammett	Heterocyclic compounds; Indices of aromaticity; Hammett equation	Studies of NMR Chemical Shifts of Chalcone Derivatives of Five-membered Monoheterocycles and Determination of Aromaticity Indices	한인숙
34	2019-07	Thiazole-Solar Cells	Polymer solar cells; Thiazole-based polymers; Quinoxaline-based copolymers	Visible to near-infrared-absorbing polymers containing bithiazole and 2,3-didodecyl-6,7-difluoroquinoxaline derivatives for polymer solar cells	진영읍

동학 불코(Bull. Korean Chem. Soc.) 캠페인

연번	게재연월	연구분야	키워드	논문 제목	교신저자
35	2019-07	Copper Catalysis	Aminonaphthalene; Dipolar cycloaddition; Ketenimine; Cyclization; Copper	Copper(I)-Catalyzed Cyclization Reactions of Ethyl (E)-a-Ethynyl-b-aryl-a,b-unsaturated Esters with N-Sulfonyl Azides: Synthesis of 1-Aminonaphthalene, 3-Aminobenzofuran, and 3-Aminothiobenzofuran Derivatives	이필호
36	2019-07	Total Synthesis	Baphicacanthin A; Phenoxazinone; Total synthesis; Global hydrogenolysis/hydrogenation	The First Synthesis of Baphicacanthin A, a Natural Phenoxazinone Alkaloid Derived from Baphicacanthus cusia	한영택
37	2019-07	Nat. Prot Isolation	Bacillus velezensis GH1-13; Biocontrol agent; Cyclic lipopeptide; Secondary metabolite; Surfactin	Structure and Mechanism of Surfactin Peptide from Bacillus velezensis Antagonistic to Fungi Plant Pathogens	이철원
38	2019-07	Asymmetric [3+3]	Cycloaddition; Asymmetric catalysis; Donor–acceptor aziridine; Tetrahydroisoquinoline	Enantioselective Catalytic [3+3] Cycloaddition of Donor–Acceptor Aziridines with m-N,N-Dialkylaminophenyl Methylidenemalonates	김성곤
39	2019-07	5-exo Cyclization	(Z)-Aurone o-(Alkynon-1-yl)phenols; Thallium(I) acetate; 5-exo Cyclization	Efficient Synthesis of (Z)-Aurones by the Thallium(I) acetate-Catalyzed 5-exo Cyclization of o-(Alkynon-1-yl)phenols	이재인
40	2019-08	MedChem-S&A	Diabetes; Decursinol; FoxO-1; Blood glucose reduction efficacy; Angelica gigas	Synthesis and biological evaluation of Decursinol derivatives as FoxO-1 inhibitors in HepG2 cells	유국현
41	2019-08	Fluorescent Sensor	Rhodamine B; 2H-benzo[b][1,4]oxazin-3(4H)-one; Proton detection ; Fluorescence; UV–Vis absorption	Novel Rhodamine B and 2H-benzo[b][1,4]oxazin-3(4H)-one Derived Fluorescent Sensor for Low pH Value Detection	신동수
42	2019-08	Pd Catalysis	Alkoxyallene acetals; Pd-catalyzed addition; Stereoselective; Azacycle Sugar	Stereoselective Construction of N,O- and O,O-Acetals by Pd-Catalyzed Addition of Heteroatoms to Alkoxyallene	하현준
43	2019-08	MedChem-S&R	Clitocybin; Antioxidant; Oxidative stress ; Natural product	Synthesis of Clitocybins A, B, C and their Biological Evaluation for Antioxidant Activities	이상구
44	2019-08	Lewis Base Catalysis	Vinyl epoxide; Kinetic resolution; Lewis base catalysis; Epoxide opening; Chlorine	Cooperative Stereocontrol by Proximal and Distal Chlorine Substituents in the Chiral Lewis Base-Catalyzed Kinetic Resolution of cis-Vinyl Epoxide	정원진
45	2019-09	Asymmetric Synth	1,3,3-Trinitroazetidine; Asymmetric synthesis; High-energy materials; Sensitivity	Synthesis of Enantiopure 2-Alkyl-1,3,3-Trinitroazetidines	조창우
46	2019-09	Chiral Resolution	3,5-dibromo-2-pyrone; Diels–Alder reaction; Chiral resolution; Diastereomeric salt	Chiral Resolution of Racemic 2-Pyrone Diels-Alder Cycloadduct by Diastereomeric Salt Formation	조천규
47	2019-09	Mechanochemistry	Mechanochemical synthesis; Polydiphenylamine; Eutectic liquid	Mechanochemical Synthesis of Polydiphenylamine Derivatives from a Supramolecular Eutectic Liquid of Diphenylamine with Benzophenone	박치영
48	2019-10	S_NAr Reaction	Aromatic nucleophilic substitution; N,N,N′,N′-tetramethyl thiourea; Urea; 2,4-dimethoxynitrobenzene	Novel effect of thiourea/urea additives on the aromatic nucleophilic substitution of 2,4-dimethoxynitrobenzene	민경훈
49	2019-10	Cu-free Cyanation	tert-butyl isocyanide; Metal-free; Aryl nitrile; Aniline; Solvent-free; Cyanation	Cyanation of Anilines to Aryl Nitrile Using tert-Butyl Isocyanide: A Simple and Copper-Free Procedure	Poh Wai Chia
50	2019-10	Hydroboration Rxn	Hydroboration; Lithium tert-butoxide; Aldehydes; Ketones; Esters; Pinacolborane (HBpin)	Lithium tert-butoxide catalyzed hydroboration of carbonyl compounds	안덕근
51	2019-10	Physical Organic	Aminolysis; Bronsted-plot; Hammett plot; Yukawa-Tsuno plot	Reactions of 2,4-dinitrophenyl 5-substituted-2-thiophenecarboxylates with R2NH/R2NH2+ in 20 mol% DMSO(aq). Effects of 5-thienyl substituent and leaving group on the reaction mechanism	변상용
52	2019-10	Organo Catalysis	Reductive amination; Aldehydes; N,N′-diphenyl-S-benzylisothiouronium iodide	Direct Reductive Amination of Aldehydes using Hantzsch Ester Promoted by N,N′-Diphenyl-S-benzylisothiouronium Iodide as an Organocatalyst	김택현
53	2019-10	Chemosensors	Chemosensor; Thiazole; Zn^{2+} ion; Excited-state intramolecular proton transfer; Specific binding	Thiazole-Based Orange-Emitting Excited-State Intramolecular Proton Transfer Chemosensors for Selective and Ratiometric Sensing of Zn2+ Ions	박상혁

동학 불코(Bull. Korean Chem. Soc.) 캠페인

연번	게재연월	연구분야	키워드	논문 제목	교신저자
54	2019-11	Pd Cat.-Microwave	Heteroannulation; Internal alkyne; Palladium; 5,6,7-trisubstituted Pyrrolo[2,3-d]pyrimidine; Microwave	Microwave-assisted synthesis of 5,6,7-trisubstituted pyrrolo[2,3-d]pyrimidines via palladium-catalyzed heteroannulation with internal alkynes	염을균
55	2019-11	Fluorescence prob	Imidazolium; Aggregation-induced emission; Fluorescence probe; Cell imaging	The studies on the fluorescence behaviors and applications for two D-π-A type imidazolium analogues	Chao Gao
56	2019-11	Synthetic Method	Sulfonylation; Indole; Iodination; Thiosulfonate; Multifunctionalization	Multifunctionalization of Indoles: Synthesis of 3-Iodo-2-sulfonyl Indoles	장혜영
57	2019-12	Enzymatic Reaction	(+)-endo-Brevicomin l-Tartaric acid; Enzyme reaction; Inversion chiral center; Total synthesis	Chiral Synthesis of Natural (+)-endo-Brevicomin with Enzymatic Reaction from L-Tartaric Acid	서영배
58	2019-12	Organic solar cells	Polymer; Photovoltaic cells; Thieno[2,3-b]indole (2-TI); Electron-deficient unit; Organic solar cells (OSCs)	Syntheses and Properties of Conjugated Polymers Containing Thieno[2,3-b]indole with Different Electron Deficient Units	서홍석
59	2019-12	Photo-catalysis	Semipinacol-type rearrangement; Sulfinic acids; Photoredox process	Photocatalytic synthesis of b-sulfonated cyclopentanones via sulfonylation and semipinacol-type rearrangement cascades of vinyl cyclobutanols	김대영
60	2019-12	Synthetic Method	Allylation; Borane; Diastereoselectivity; Enantioselectivity; Diazoalkene	A Novel Synthesis of (E)-2-Alkenylborane from Chiral Borane and Diazoalkene: Asymmetric Alkenylboration of Aldehydes	김지민
61	2020-01	Pt Catalysis-[3+2]	Bisannulation; Platinum catalysis; [3 + 2] Cyclization; 3,6-Dialkynylnaphthalen-2,7-dicarboxaldehyde; Platinum-carbenoid	Bisannulation of Platinum-bound Isochromeno[6,7-g]isochromene-2,9-diium derived from 3,6-dialkynylnaphthalene-2,7-dicaboxaldehyde with Cyclohexene	오창호
62	2020-02	Photocatalysis	Addition reaction; Photosensitizer; N-α-Trimethylsilyl-N-alkylglycinates; Azomethine ylide; Pyrrole; Enamino-ester	Photosensitizer-Catalyzed Addition Reactions of N-α-Trimethylsilyl-N-Alkylglycinates to Dimethyl Acetylenedicarboxylate	조대원
63	2020-02	Continu Flow Chem	Continuous flow chemistry; High-energy materials; 1-Methyl-3,5-dinitro-1,2,4-triazole	Efficient and Safe Synthesis of 1-methyl-3,5-dinitro-1,2,4-triazole using Continuous Flow Chemistry	배세원
64	2020-02	Surface functional	Surface functionalization; Polymeric coating; SI-ARGET ATRP; “Click” chemistry	Binding Capability and Non–biofouling Efficacy of Poly[2–(methacryloyloxy)ethyl–4–pentynoate–co–oligo(ethylene glycol) methacrylate] Films on Gold Surfaces	이정규
65	2020-02	Synth Method	1,2,4-thiadiazole; Primary thioamide; Calcium hypochlorite; Oxidative dimerization	Expedient synthesis of 1,2,4-thiadiazoles from primary thioamides using calcium hypochlorite in dichloromethane	이기승
66	2020-03	Syn-phosphoamidate	PMO; PMO dimer; Diastereoselective synthesis; Lithium bromide	Diastereoselective Synthesis of Phosphorodiamidate Morpholino Dimers	전근호
67	2020-03	Metal-free-azide	Phosphorylation; Vinyl azides; β-Ketophophine oxides; Metal-free coupling; Radical process	Transition metal-free phosphorylation of vinyl azides: A convenient synthesis of b-ketophosphine oxides	김대영
68	2020-03	Continu Flow Chem	Microreactor; Continuous flow synthesis; Graphene oxide; Palladium catalyst	Droplet-Based Continuous Flow Synthesis of Palladium Supported on Reduced Graphene Oxide	박찬필
69	2020-03	Copper Catalysis	Selenylation; Semipinacol-type rearrangement; Alkenyl cyclobutanols; Diselenides	Copper-Promoted Synthesis of b-Selenylated Cyclopentanones via Selenylation and 1,2-Alkyl Migration Sequences of Vinyl Cyclobutanols	김대영
70	2020-04	C-H Activation	Isocoumarin; phosphaisocoumarin; C-H activation; metal catalyst	Synthetic Methods of Isocoumarins and Phosphaisocoumarins through C-H Activation	이필호
71	2020-04	[18F]-Fluorination	[^{18}F]F-DOPA Fluorination; Quantum chemistry; Diaryl iodonium salt	Toward the Robust Synthesis of [18F]F-dopa: Quantum Chemical Analysis of SNAr cold Fluorination of Diaryl Iodonium Salt by 19F-	이성열
72	2020-04	Synth Method	Thioflavanones; Condensation; 6-Endo cyclization	New Synthesis of Thioflavanones by the Regioselective Cyclization of 1-(2-Benzylthio)phenyl-3-phenyl-2-propen-1-ones with Hydrobromic Acid	이재인
73	2020-04	Med-S&R	N-Arylsulfonylimidazolidinone; N-Arylsulfonyllactam; Anticancer activity; Antimitotic agent	Structure activity relationship of 4-phenyl-1-(1-acylindolin-5-ylsulfonyl)pyrrolidin-2-ones on anticancer activity	정상헌
74	2020-05	Horner–W–E Rxn	Chlorophyll a; Chlorin Cyanochlorin; Allomerization; Horner–Wadsworth–Emmons reaction	Efficient Synthesis of Long-Wavelength Absorbing Cyanochlorophyll a Derivatives via Stereoselective Horner–Wadsworth–Emmons Reaction	윤일

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연번	게재연월	연구분야	키워드	논문 제목	교신저자
75	2020-05	Med-S&R	Niche chemistry; Valproic acid; Antiepileptic	Synthesis and Antiepileptic activity Evaluation of Valproic acid Derivatives by Niche Chemistry	정대일
76	2020-05	Orgno-Catalysis	Asymmetric catalysis; Organocatalysis o-Quinone methides; 2-amino-4H-chromene	Enantioselective Organocatalytic Michael Addition and Ring Closure Cascade of o-Quinone Methides with Nitriles	김대영
77	2020-06	Cp*Rh(III), N-H	Phosphoryl amide; Rhodium(III); N-H insertion; Diazoester; α-Phosphoryl amino ester	Rhodium(III)-Catalyzed N-H Insertion Reaction of Phosphoryl Amides α-Aryl Diazoesters for the Synthesis of α-Phosphoryl Amino Esters	이필호
78	2020-06	C-H Functionalization	Transient directing group; Traceless directing group; Temporary directing group; C–H activation; C–H functionalization	Transient Directing Group-assisted C–H Bond Functionalization of Aliphatic Amines: Strategies for Efficiency and Site-selectivity	김민
79	2020-07	Fluorescence probe	Fluorescent probe; Mercury ions; Aggregation-induced emission; Intramolecular charge transfer	A simple fluorescence turn-on probe for the detection of Hg 2+ ion in aqueous solution and soil with AIE and ICT mechanisms	Chao, Gao
80	2020-07	Bismuth Catalysis	Bismuth; Catalysis; Pyranocoumarin; Furocoumarin; Regioselectivity	Regioselective Bismuth-Catalyzed Synthesis of Pyranocoumarins and Furocoumarins from 4-Hydroxycoumarins and Propargyl Alcohols	이필호
81	2020-07	Fluorescent sensor	Sol–gel film; Covalent immobilization; Fluorescence sensor; Low pH	Sol-gel-based fluorescent sensor for measuring pH values in acidic environments	김형진
82	2020-07	Synt Method	Acylation; Alkoxycarbonylation; Dehydration; Dehydrosulfurization; (Thio)carbonyl transfer	Synthesis and Versatile Utilization of 2-Pyridyl and Pyrimidyl-Related Reagents	이재인
83	2020-07	Annulation-[4+3]	Annulation; Azaoxyallyl cation; Benzodiazepinone; Catalyst-free	Facile synthesis of functionalized 1,4-benzodiazepine-3-one-5-acetates via [4+3]-annulation of azaoxyallyl cations with 2-aminophenyl α,β-unsaturated esters	김성곤
84	2020-08	DABCO-Catalysis	DABCO-catalyzed; Quaternary stereogenic centers; Functionalized cyclohexanones; Solvent-free conditions	DABCO-Catalyzed the Synthesis of Densely Functionalized Cyclohexanones in a Benign Manner	Lashkari, Mojtaba
85	2020-08	18F-fluorination	^{18}F-fluorination; ^{18}F-D_2-deprenyl PET imaging; Neuroinflammation; Positron emission tomography	Optimization of the synthesis of 18F-D2-deprenyl with mild 18F-fluorination and minimum precursor input for PET imaging of neuroinflammation	오승준
86	2020-08	Copper Catalysis	Hetroary-aryl ether; Ligand free; Copper catalyst; O-arylation; Microwave heating	Diversification of heteroaryl-aryl ether via ligand-free, copper-catalyzed O-arylation under microwave heating	염을균
87	2020-09	Dehydrosulfuration	Dehydrosulfurative coupling; Azolation; Azolylpyrimidine; Pyrimidine; 3,4-Dihydropyrimidine-1H-2-thione	Oxidative Dehydrosulfurative Azolation of 3,4-Dihydropyrimidin-1H-2-thiones	손정훈
88	2020-09	Microwave Rxn	Condensation; Acetophenone; Pyrazoline	Microwave Assisted Synthesis and Molecular Docking Study of Heteroaromatic Chalcone Derivatives as potential Antibacterial Agents	Farooq, Saba
89	2020-09	Explosive Chem	Explosives; Primary explosives; Green explosives; Bisnitropyrazoles	Bis(4-azido-3,5-dinitro-1H-pyrazol-1-yl)methane as a new green primary explosive	김영규
90	2020-09	Metal-Free Syn	Dihydro[1,3]oxazine; Intramolecular hydrogen bonding; Metal-free synthesis	Efficient Metal-Free Synthesis of Dihydro[1,3]oxazines Assisted by Intramolecular Hydrogen Bonding	윤일
91	2020-10	Cat-hydroboration	Catalyzed hydroboration; Lithium bromide; Chemoselective reduction; Pinacolborane (HBpin)	Lithium bromide/HBpin: A mild and effective catalytic system for the selective hydroboration of aldehydes and ketones	안덕근
92	2020-12	PTC Rxn	Ionic liquid; Fluorination; Phase transfer catalyst; Pyrene; Graphene oxide	Pyrene-tagged alcoholic ionic liquids as phase transfer catalysts for nucleophilic fluorination	김동욱
93	2020-12	Synth. Method		Choline hydroxide as a versatile medium for catalyst-free O-functionalization of phenols	김승회
94	2021-01E	Fluorescent probe	Fluorescent probe; Indolizine; Fluoride sensor; Bioimaging	Fluorescent fluoride sensor based on indolizine core skeleton for bioimaging	김은하
95	2021-01E	Real-time monitor	NQO1 enzyme; Trimethyl lock quinone-functionalized coumarin; Real-time monitoring; Fluorescence imaging probe	Trimethyl lock quinone-functionalized coumarin for real-time monitoring of NQO1 activity in the live cells	이민희

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BKCS Special Issue on "Chemosensors and Imaging Probes"

유기분과에서는 2021년도에 BKCS 에 "Chemical Synthesis & Reaction Development" 에 관한 주제로 특별호를 발간한데 이어, 김종승 회원(고려대)과 윤주영 회원(이화여대)이 guest editor로 하여 "Chemosensors and Imaging Probes"에 관한 특별호도 발간하였습니다. 해당 특별호가 발간될 수 있도록 도움주신 유기분과회원분들께 진심으로 감사드립니다(몇몇 논문은 현재도 심사 중으로 추후 업데이트 예정입니다). 이번 특별호에 실린 논문의 graphic abstract를 첨부하였습니다.

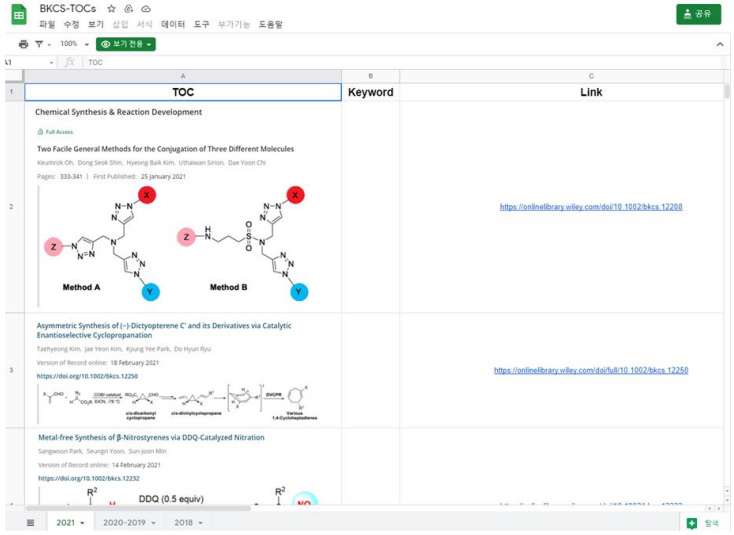
2021년도 대한화학회 유기분과에서는 BKCS의 impact Factor 향상을 위해서 동학 불코 캠페인을 진행하고 있습니다. 유기분과 회원분들이 발표하시는 논문에서 BKCS 발표 논문을 1년에 2-3번 정도만 인용하신다면 2년 후 BKCS Impact Factor가 많이 올라 갈수 있으리라 기대합니다. 회원님들의 많은 관심과 참여를 적극 부탁드립니다!

또한 2021년도 BKCS의 새로운 모습으로 탈바꿈하고 있습니다. 그 일환으로 BKCS 로고를 새로운 모습으로 단장하였습니다. 태극 문양과 대한화학회의 문양이 들어간 멋진 모습으로 바뀌었습니다. BKCS가 대한민국의 대표저널이 되는 그 날까지 회원 분들의 많은 관심을 부탁드립니다.

BKCS Bulletin of the Korean Chemical Society

BKCS TOC 정리 자료: 유기화학분과회 홈페이지에서 바로 가기로 이용 가능

유기분과회 홈페이지에서 아래쪽 광고 배너에 BKCS Table of Contents 항목을 신설하였습니다. 배너를 클릭하시면 엑셀파일로 2021년 BKCS 유기분야 TOC가 정리되어 있으며, 2020-2019 및 2018년도 자료도 바로 보실 수 있습니다. 많은 인용 부탁 드립니다.



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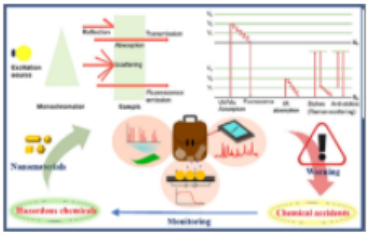
BKCS Special Issue on “Chemosensors and Imaging Probes”

On-Site Detection for Hazardous Materials in Chemical Accidents

Nguyễn Hoàng Ly, Ho Hyun Kim, Sang-Woo Joo

Pages: 4-16 | First Published: 25 November 2020

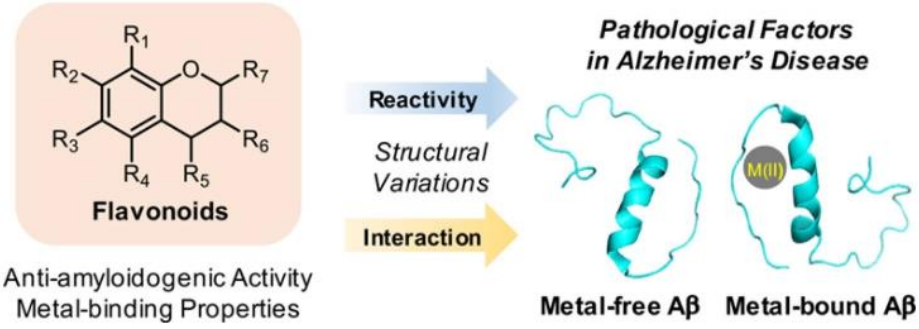


On-site detection for hazardous materials in chemical accidents

Reactivity of Flavonoids Containing a Catechol or Pyrogallol Moiety with Metal-Free and Metal-Associated Amyloid-β

Seongmin Park, Yelim Yi, Mi Hee Lim

Pages: 17-24 | First Published: 13 December 2020

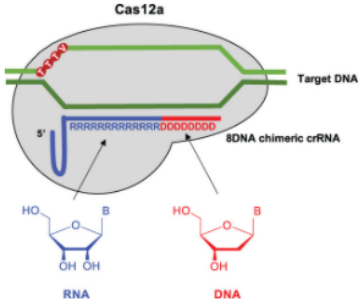


Reactivity of Flavonoids Containing a Catechol or Pyrogallol Moiety with Metal-Free and Metal-Associated Amyloid-β

Chimeric crRNAs Retaining Activity of Cas12a with Potential to Improve Specificity

Jihyun Park, Jaewoo Choi, Men Thi Hoai Duong, Hee-Chul Ahn, Seung Woo Hong, Gil Tae Hwang, Jinsu An, Hak Suk Chung, Dae-Ro Ahn

Pages: 87-90 | First Published: 30 September 2020



RNA residues in the guide region of crRNA for Cas12a can be partially replaced by DNA.

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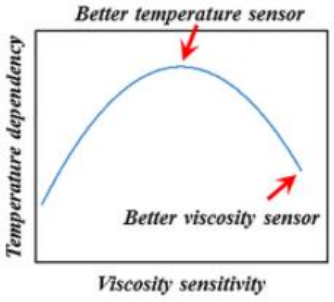
A Systematic Study on the Relationship Between Viscosity Sensitivity and Temperature Dependency of BODIPY Rotors

Xiao Liu, Weijie Chi, Antonio de J Gómez-Infante, Eduardo Peña-Cabrera, Xiaogang Liu, Young-Tae Chang

Pages: 91-94 | First Published: 02 November 2020

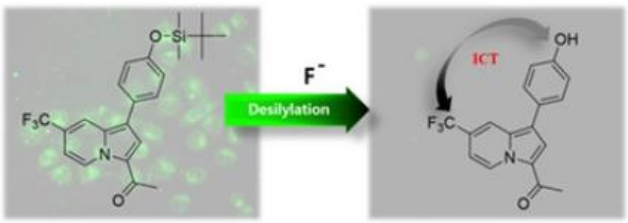


Different functions of molecular rotors based on viscosity sensitivity and temperature dependence.

Fluorescent Fluoride Sensor Based on Indolizine Core Skeleton for Bioimaging

Hyungi Kim, Minchul Shin, Eunha Kim

Pages: 95-98 | First Published: 30 October 2020

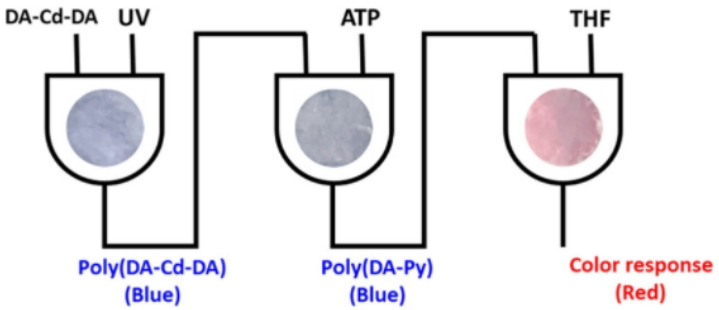


Schematic representation of fluoride anion sensing with Silyl-KIz in live cell

A Polydiacetylene-based Colorimetric Adenosine Triphosphate Sensor: A Molecular Protecting Approach

Hyunjeong Shin, Jong Pil Lee, Jong-Man Kim

Pages: 99-102 | First Published: 16 November 2020



A colorimetric polydiacetylene (PDA) sensor for the detection of ATP was developed based on a molecular protection strategy.

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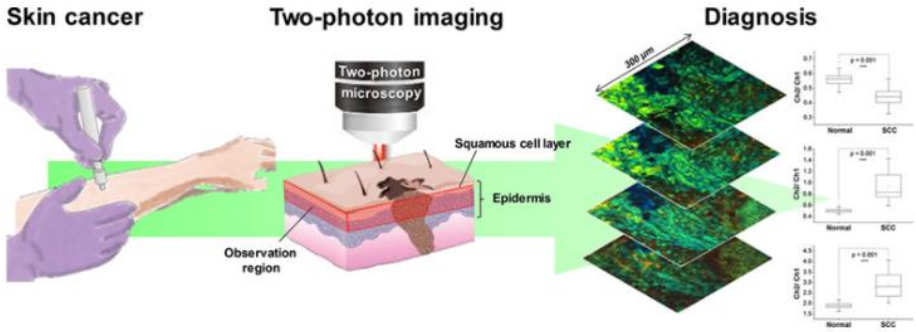
Analyzing Nonmelanoma Skin Cancer Using Enzyme-Activatable Two-Photon Probes

Chang Su Lim, Jee Woong Choi, You Chan Kim, Hwan Myung Kim

Pages: 103-106 | First Published: 20 November 2020



In this study, we attempted to diagnose nonmelanoma skin cancer (NMSC) more accurately by two-photon microscopy imaging deep inside of skin tissue using a two-photon probes that can detect three enzyme activities.

Fluorescent Chemosensors for Zn^{2+} and Pyrophosphate

Jeewon Chung, Kunemadihalli Mathada Kotraiah Swamy, Jin A Kim, Youngmee Kim, Sung-Jin Kim, Juyoung Yoon

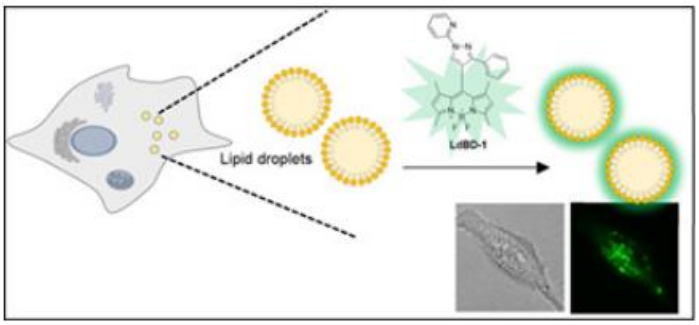
Pages: 107-110 | First Published: 03 December 2020

Dual functions of napthoimidazole and naphthoimidazolium in the pre-organized binding site were successfully applied to selectively detect Zn^{2+} and PPi via selective fluorescent changes.

A Pyridinyl-Pyrazole BODIPY as Lipid Droplets Probe

Dhiraj P. Murale, Md Mamunul Haque, Kyung Tae Hong, Jun-Seok Lee

Pages: 111-114 | First Published: 04 January 2021



A schematics for pyridinyl-pyrazole BODIPY for ipid droplet imagings.

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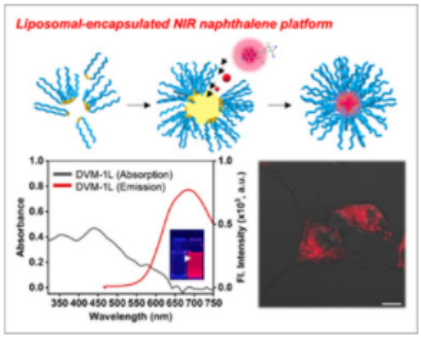
BKCS Special Issue on "Chemosensors and Imaging Probes"

Liposomal-Encapsulated Near-Infrared Fluorophore Based on π-Extended Dipolar Naphthalene Platform and Its Imaging Applications in Human Cancer Cells

Yuna Jung, Byeong Wook Kim, Junyang Jung, B. Moon Kim, Dokyoung Kim

Pages: 115-118 | First Published: 10 December 2020

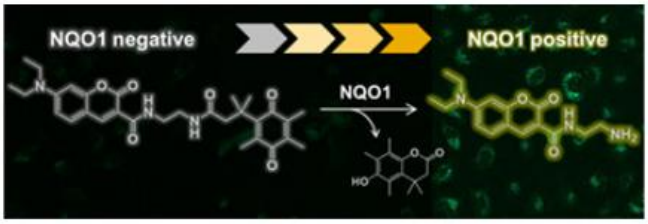


A new near-infrared emitting liposomal nano-formulation was developed, which has a dipolar dye in the core and demonstrated for human cancer cells' fluorescence imaging.

Trimethyl Lock Quinone-Functionalized Coumarin for Real-time Monitoring of NQO1 Activity in the Live Cells

Sun Young Park, Shin A Yoon, Min Hee Lee

Pages: 119-123 | First Published: 03 November 2020

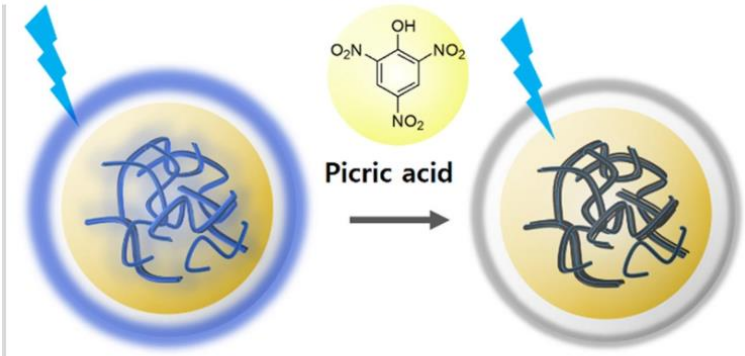


The developed trimethyl lock quinone-functionalized coumarin is biocompatible, easily penetrates living cells, and shows a fluorescence turn-on in response to NQO1 activity in the cell environments

Synthesis of Melamine-Formaldehyde Microcapsules Containing Polyfluorene for Fluorescent Detection of Picric Acid in Aqueous Medium

Geun Tae Pak, Hyunchul Kim, Taek Seung Lee

Pages: 124-129 | First Published: 05 November 2020



Fluorescent microcapsules could sensitively and selectively detect picric acid, which is one of the dangerous explosive compounds.

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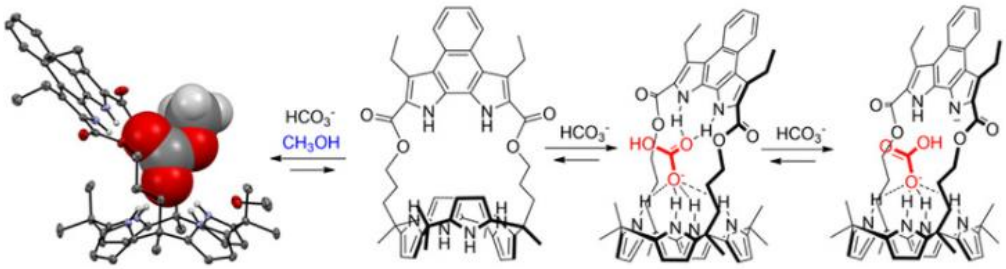
BKCS Special Issue on "Chemosensors and Imaging Probes"

Bicarbonate Recognition Features of a Naphthobipyrrole-strapped Calix[4]pyrrole

Ju Hyun Oh, Ju Ho Yang, Han-Byeol Choi, Sung Kuk Kim

Pages: 130-134 | First Published: 27 November 2020

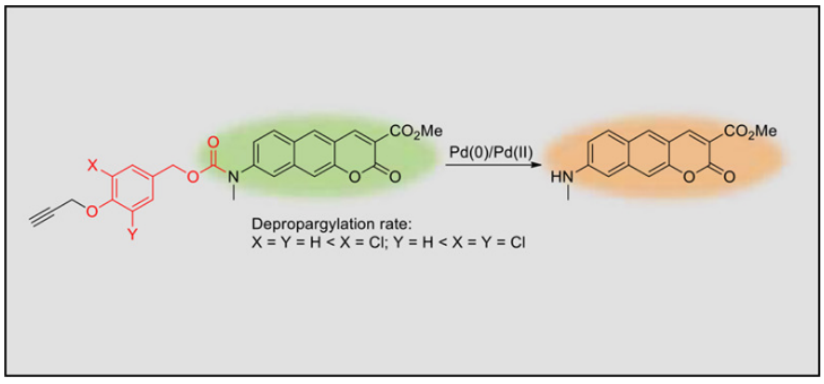


The naphthobipyrrole-strapped calix[4]pyrrole binds the bicarbonate anion with high affinity via two sequent interaction modes.

Electronic Effects on the Depropargylation Process in the Reaction-based Fluorescent Detection of Palladium Species: Benzocoumarin-based Ratiometric Sensing Systems

Seo Won Cho, Ye Jin Reo, Sourav Sarkar, Kyo Han Ahn

Pages: 135-139 | First Published: 29 December 2020

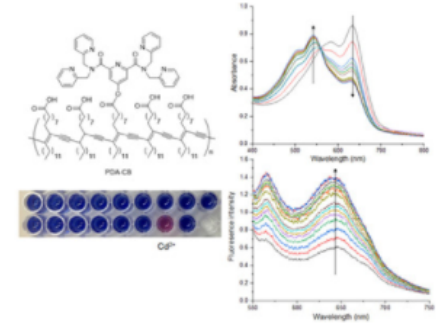


The fluorescence detection of Pd(0)/Pd(II) through depropargylation reaction proceeds faster as the self-immolative moiety became more electron-deficient, as evaluated with three benzocoumarin-based aryl propargyl ether-type, ratiometric signaling probes.

Polydiacetylenes Functionalized with Chelidamic Acid and 2,2'-Dipicolylamine for Colorimetric Responses to Cadmium Ions

Thanh Chung Pham, Hyun Sung Kim, Songyi Lee

Pages: 140-143 | First Published: 15 December 2020



A novel polydiacetylene-linked ligand derived from the reaction between chelidamic acid and bis(pyridin-2-ylmethyl)amine (PDA-CB) showed excellent selectivity and sensitivity for Cd^{2+} ions compared with other metal ions, including Zn^{2+}.

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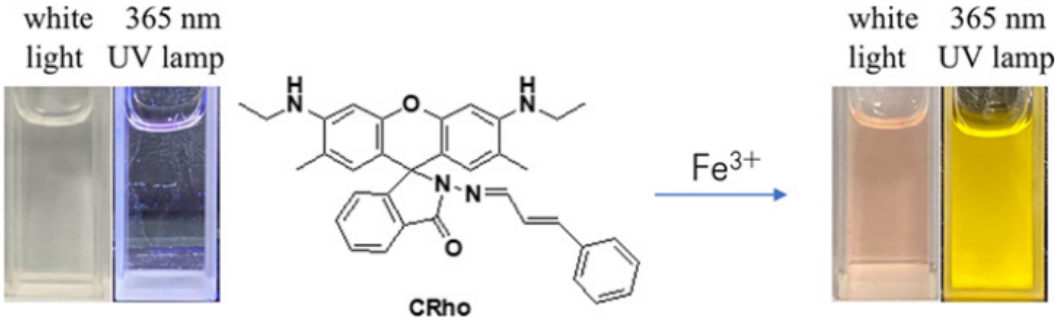
BKCS Special Issue on "Chemosensors and Imaging Probes"

A Selective Fluorescent Probe for Ferric Ion Based on Rhodamine 6G

Yuting Wang, Yen Leng Pak, Qingling Xu

Pages: 262-264 | First Published: 20 December 2020

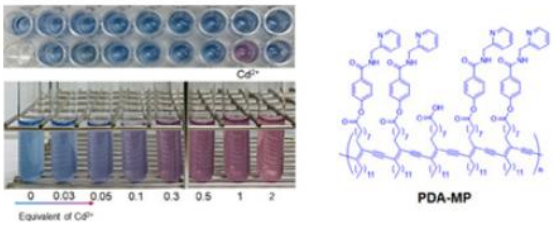


Development of a highly selective and sensitive fluorescent turn-on probe **CRho** for ferric ion detection in water/acetonitrile based on rhodamine 6G and Schiff base.

Polydiacetylenes Containing 2-Picolylamide Chemosensor for Colorimetric Detection of Cadmium Ions

Yong Kyun Kim, Thanh Chung Pham, Jaewon Kim, Chaeeon Bae, Yeonghwan Choi, Min Hee Jo, Songyi Lee

Pages: 265-269 | First Published: 04 December 2020

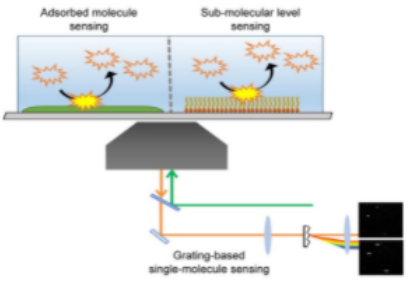


Polydiacetylenes containing Schiff base chemosensor for dual-channel detection of cadmium ions
This article describes the preparation and analysis of Cd^{2+}-sensing polydiacetylene-based chemosensors (PDA-MP).

Single-Molecule Sensing by Grating-based Spectrally Resolved Super-Resolution Microscopy

Geun-ho Kim, Jinkyoung Chung, Hyunbum Park, Doory Kim

Pages: 270-278 | First Published: 16 December 2020



Single-molecule polarity sensing experiment by combining a grating-based spectrally resolved super-resolution fluorescence microscopy and a solvatochromic dye

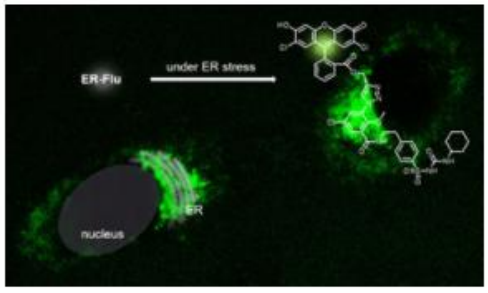
동학 불코(Bull. Korean Chem. Soc.) 캠페인

BKCS Special Issue on “Chemosensors and Imaging Probes”

Endoplasmic Reticulum Targeting Reactive Oxygen Species Sensor Based on Dihydrofluorescein: Application of Endoplasmic Reticulum Stress

Hoa Thi Le, Hye-Ryeong Jo, Se-Yun Oh, Jinwook Jung, Young Gi Kim, Chulhun Kang, Tae Woo Kim

Pages: 279-285 | First Published: 18 December 2020



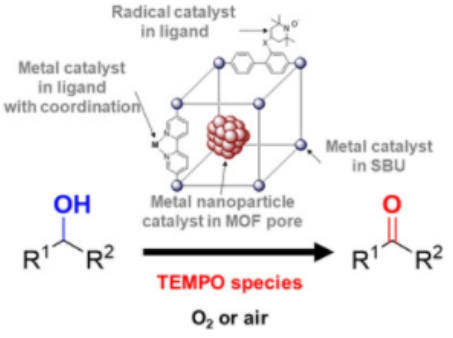
ER-targeting fluorogenic ROS chemosensor (ER-Flu) was synthesized based on modular approach. ER-Flu's cellular localization at the ER was confirmed by confocal colocalization experiments. ER-Flu generated strong fluorescence under ER stress. ER-Flu can be applied to monitor ER redox environment in live cells.

BKCS Special Issue on “Metal-Organic Frameworks”

Strategies in Metal–Organic Framework-based Catalysts for the Aerobic Oxidation of Alcohols and Recent Progress

Jooyeon Lee, Seungpyo Hong, Jonghyeon Lee, Seongwoo Kim, Jinho Kim, Min Kim

Pages: 359-368 | First Published: 20 January 2021



We summarize the performance of MOF-based catalysts for the aerobic oxidation of alcohols based on the position of the catalytic species and the type of functionalization. Indeed, recent advances in MOF-based catalysts for aerobic oxidation are discussed in terms of catalytic efficiency and substrate size discrimination.

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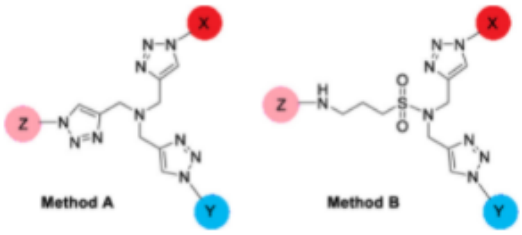
BKCS Special Issue on "Chemical Synthesis & Reaction Development"

Two Facile General Methods for the Conjugation of Three Different Molecules

Keumrok Oh, Dong Seok Shin, Hyeong Baik Kim, Uthaiwan Sirion, Dae Yoon Chi

Pages: 333-341 | First Published: 25 January 2021

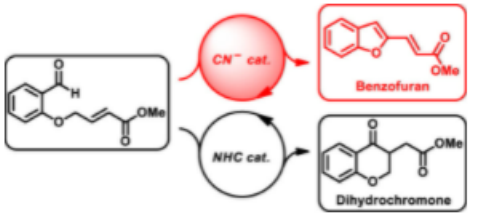


Method A uses three copper(I) catalyzed azide/alkyne 1,3-dipolar cycloadditions in series. Method B uses two copper(I) catalyzed azide/alkyne 1,3-dipolar cycloadditions and one conjugation reaction of amine and isothiocyanate.

Remarkable Differences in Reactivity between Cyanide and N-Heterocyclic Carbenes in Ring-Closing Reactions of 4-(2-Formylphenoxy)but-2-Enoate Derivatives

Eunjoon Park, Jina Park, Cheol-Hong Cheon

Pages: 483-485 | First Published: 15 November 2020

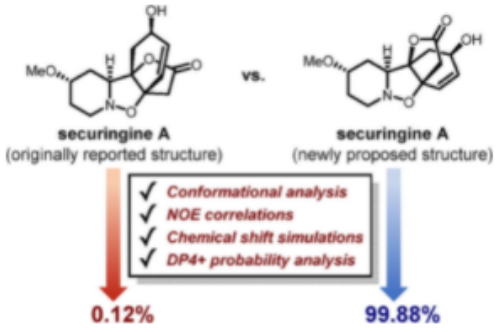


A different reactivity between cyanide and NHC with 4-(2-formylphenoxy) but-2-enoate derivatives is described.

Calculation-Assisted Stereochemical Analysis of Securingine A

Gyumin Kang, Mu-Hyun Baik, Sunkyu Han

Pages: 486-488 | First Published: 22 November 2020



Presented here is a plausible structural candidate of securingine A that was not considered thus far. The newly proposed structure of securingine A is consistent with experimental NOESY data. DP4+ probability analysis of computed ^{1}H and ^{13}C chemical shifts corroborates the viability of our newly proposed structure. We propose a biosynthetic scenario that interrelates the newly suggested structure of securingine A and securingine B.

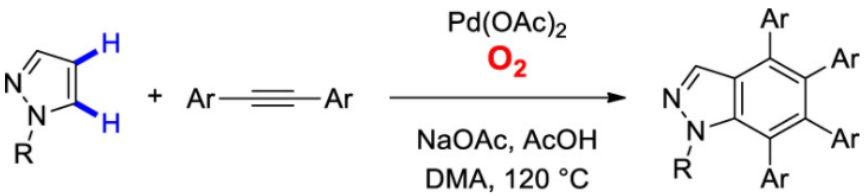
동학 불코(Bull. Korean Chem. Soc.) 캠페인

BKCS Special Issue on "Chemical Synthesis & Reaction Development"

Palladium-catalyzed Aerobic Benzannulation of Pyrazoles with Alkynes

Jae Yeong Song, Jin Hyeok Jang, Shih-Ching Chuang, Jung Min Joo

Pages: 489-491 | First Published: 18 December 2020

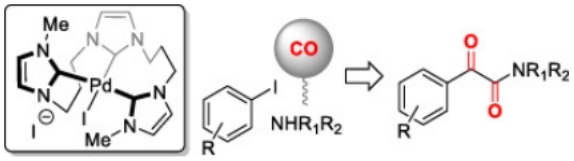


As an alternative to a stoichiometric metal oxidant, oxygen was used as an oxidant for Pd-catalyzed annulation reactions of pyrazoles with internal alkynes. The addition of sodium acetate and acetic acid was critical for stabilizing the Pd system. This green approach allowed the preparation of indazoles from readily available parent pyrazoles in a single step.

Pd(triNHC)-catalyzed Double Carbonylation of Aryliodides With Amines: The Effect of triNHC Ligands

Baji Shaik, Hye-Young Jang

Pages: 492-494 | First Published: 22 December 2020

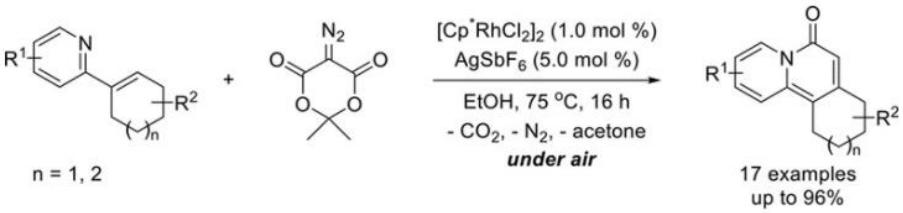


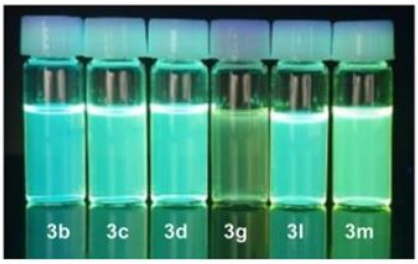
The Pd(triNHC) complex was synthesized and used for the carbonylative coupling of amine and aryl iodide. The electron-rich nature of palladium catalysts promoted the formation of α-ketoamides with good yields and selectivity.

Synthesis of Quinolizinones from Rhodium-Catalyzed C—H Activation Reaction of 2-(1-Cycloalkenyl)pyridines with Diazo Meldrum's Acids

Yonghyeon Baek, Ya Gob Kim, Phil Ho Lee

Pages: 495-498 | First Published: 07 February 2021





- Novel quinolizin-4-ones
- Low loading Rh-catalyst
- Fluorescent materials

$\lambda_{max, abs}$ (nm) : 391 to 393
$\lambda_{max, em}$ (nm) : 472 to 493
ϕ (%) : 7% - 24%

An efficient synthetic method for a broad range of quinolizin-4-one derivatives has been developed from Rh(III)-catalyzed C—H reaction of 2-(1-cycloalkenyl)pyridines with diazo Meldrum's acids using $AgSbF_6$ in ethanol.

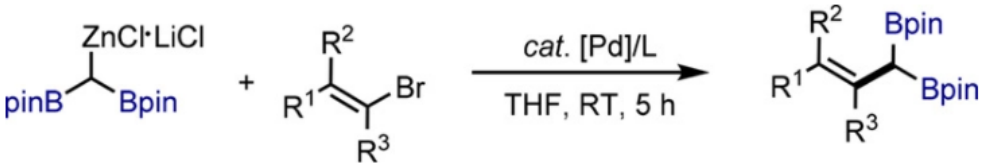
동학 불코(Bull. Korean Chem. Soc.) 캠페인

BKCS Special Issue on "Chemical Synthesis & Reaction Development"

Pd-Catalyzed Negishi Cross-Coupling of Vinyl Bromides with Diborylmethylzinc Chloride

Minjae Kim, Jun Hee Lee, Seung Hwan Cho

Pages: 499-501 | First Published: 04 January 2021

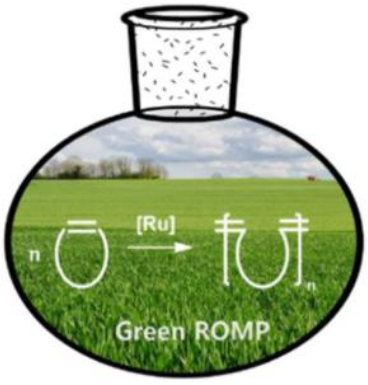


We have developed Pd-catalyzed Negishi cross-coupling of diborylmethylzinc chloride with vinyl bromides. The reaction shows a broad scope and an array of α-boryl-substituted allylic boronate esters are obtained in high efficiency.

Study of Green Solvents for Ruthenium Alkylidene Mediated Ring-Opening Metathesis Polymerization

Hyun Gyu Shin, Hyun Sub Lee, Eun Ji Hong, Jeung Gon Kim

Pages: 502-505 | First Published: 03 February 2021

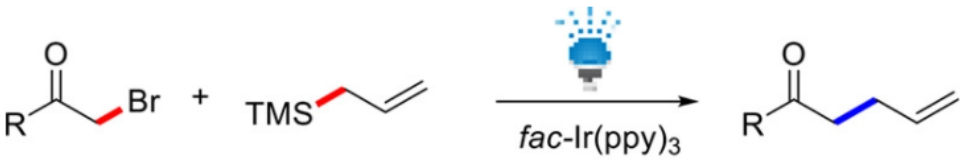


The use of green solvents in a Ru-ROMP is evaluated. Representative cyclic monomers were rapidly polymerized in environmentally safe and process friendly solvents. Among the selected green solvents, ROMP in dimethyl carbonate exhibited good reactivity and chain length control.

Visible-Light Photoredox-Catalyzed α-Allylation of α-Bromocarbonyl Compounds Using Allyltrimethylsilane

Arjun Gontala, Gwang Seok Jang, Sang Kook Woo

Pages: 506-509 | First Published: 15 January 2021



- High chemoselectivity
- 11 examples
- Up to 80% yield

Here we present allyltrimethylsilane as a novel allylation reagent in the photoredox-catalyzed α-allylation of carbonyl compounds such as ketones, esters, and amides. The reaction process shows good functional group tolerance and generates a good yield of the product.

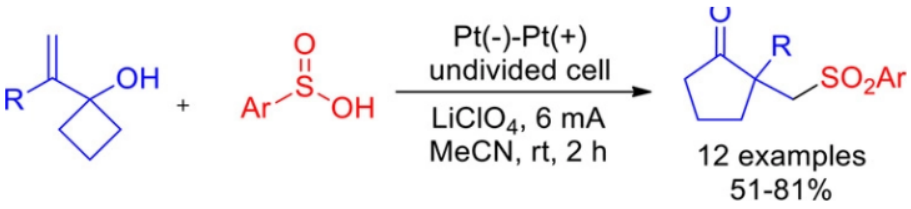
동학 불코(Bull. Korean Chem. Soc.) 캠페인

BKCS Special Issue on "Chemical Synthesis & Reaction Development"

Electrochemical Oxidative Arylsulfonylation and 1,2-Alkyl Shift Sequences of Alkenyl Cyclobutanols for the Synthesis of β-Sulfonated Cyclopentanones

Yebin Kim, Dae Young Kim

Pages: 510-513 | First Published: 11 January 2021

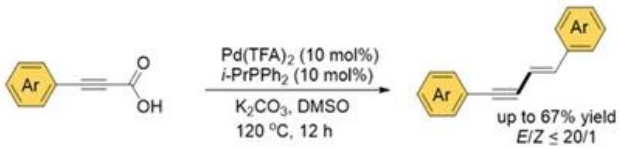


Electrochemical oxidative sulfonylation and 1,2-alkyl shift sequences of alkenyl cyclobutanols were developed that provide β-sulfonated cyclopentanones in moderate to good yields. This electrochemical system was demonstrated to be versatile and environmentally friendly and avoid the use of stoichiometric amount of chemical oxidants or reductants under mild reaction conditions.

Palladium-Catalyzed Decarboxylative Homodimerization of Propiolic Acids: Synthesis of 1,3-Enynes

Eunkyeong Seo, Jonghoon Oh, Sunwoo Lee

Pages: 514-516 | First Published: 20 January 2021

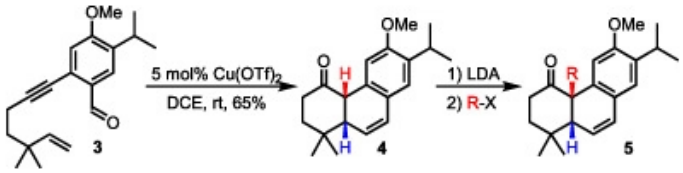


Aryl propiolic acids were transformed into 1,3-enynes via decarboxylative homodimerization.

One-Step Synthesis of Norabietane Core and its Alkylation to Abietane Analogs

Chaehyeon Seong, Juyeon Kang, Junseong Lee, Chang Ho Oh

Pages: 517-520 | First Published: 20 January 2021



Synthesis of norabietane core.

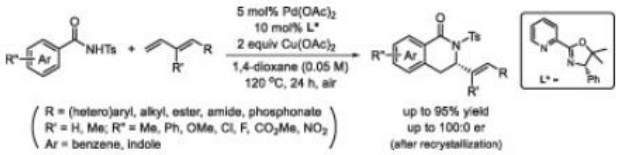
동학 불코(Bull. Korean Chem. Soc.) 캠페인

BKCS Special Issue on "Chemical Synthesis & Reaction Development"

Pd-Catalyzed Asymmetric Synthesis of 3,4-Dihydroisoquinolinones From *N*-Ts-Benzamides and 1,3-Dienes

Tae Kyun Kim, So Won Youn

Pages: 521-524 | First Published: 07 February 2021

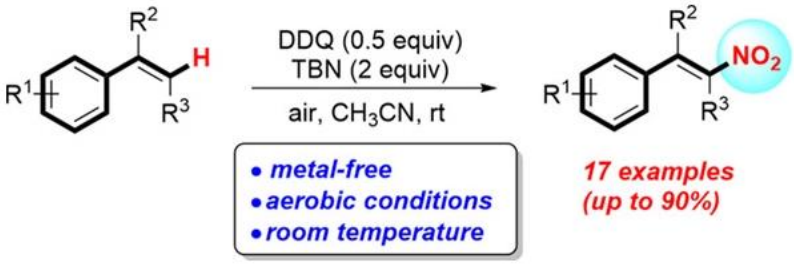


A Pd(II)-catalyzed asymmetric oxidative annulation of *N*-Ts-benzamides with 1,3-dienes using a chiral pyridine-oxazoline-type ligand for the regio- and stereoselective synthesis of chiral 3,4-dihydroisoquinolinones has been developed.

Metal-free Synthesis of β-Nitrostyrenes via DDQ-Catalyzed Nitration

Sangwoon Park, Seungri Yoon, Sun-Joon Min

Pages: 525-528 | First Published: 14 February 2021

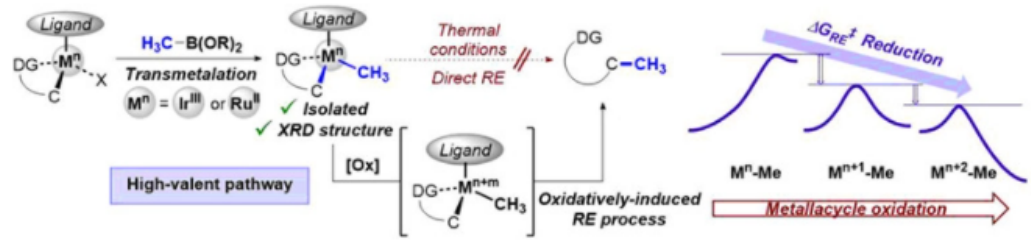


In this study, we have developed a facile synthesis of (*E*)-β-nitrostyrenes by using *tert*-butyl nitrite as a source of nitro group and DDQ as a key oxidant under aerobic condition. This process highlighted that a wide range of β-nitrostyrenes could be synthesized under mild metal-free reaction conditions at room temperature starting from readily available styrenes.

Oxidatively Induced Reductive Elimination for Methyl Group Transfer via Isolable Transmetalation Complexes

Jinwoo Kim, Seongho Jin, Dongwook Kim, Sukbok Chang

Pages: 529-532 | First Published: 04 February 2021



Detailed aspects on the oxidatively induced reductive elimination from isolated methyl iridium and ruthenium metallacycle species are investigated. The reduction of energy barrier for the reductive elimination process enabled desired C–C bond formation from Ir and Ru metal center under mild conditions.

동학 불코(Bull. Korean Chem. Soc.) 캠페인

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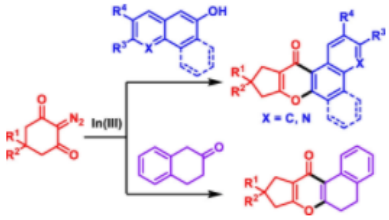
In(III)-Catalyzed *O*-Annulation of Cyclic Diazodicarbonyls with 2-Naphthol, 6-Quinolinol, β-Tetralone, and 9-Phenanthrol to Access Diverse Benzochromones

Shizuka Mei Bautista Maezono, Hari Datta Khanal, Priyanka Chaudhary, Ga Eul Park, Yong Rok Lee

Pages: 533-536 | First Published: 04 January 2021

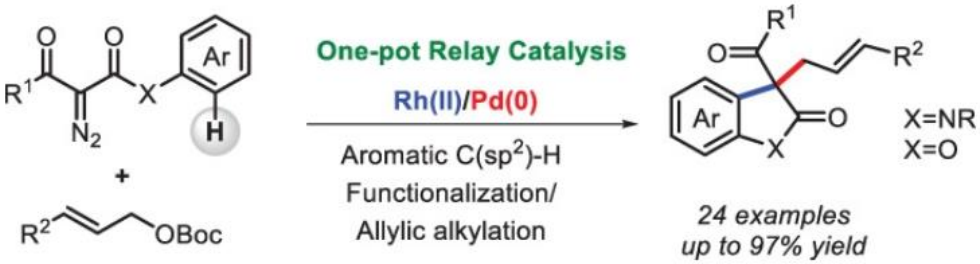


A facile synthetic pathway for the construction of diverse and functionalized benzochromones via In(III)-catalyzed *O*-annulation of cyclic diazodicarbonyls with 2-naphthols, 6-quinolinol, β-tetralone, and 9-phenanthrol is developed.

Dual Rh(II)/Pd(0) Relay Catalysis for One-Pot Synthesis of α-Quaternary Allylated Indolin-2-ones and Benzofuran-2-ones

Yu Lim Lee, Kyu Ree Lee, Zi Xuan, Sang-gi Lee

Pages: 537-541 | First Published: 04 January 2021

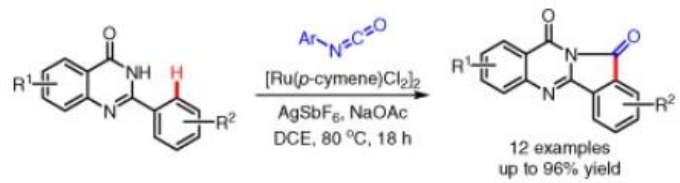


We have developed an efficient dual Rh(II)/Pd(0) relay catalysis for one-pot synthesis of α-quaternary allylated heterocyclic compounds. This reaction involves Rh(II)-catalyzed intramolecular aromatic C(sp^2)-H functionalization of α-diazo carbonyl compounds, followed by Pd(0)-catalyzed allylic alkylation of allyl carbonates. Various α-quaternary allylated indolin-2-ones and benzofuran-2-ones were synthesized in good to excellent yields (up to 97%).

Ruthenium(II)-Catalyzed C—H/N—H Carbonylative Cyclization of 2-Aryl Quinazolinones with Isocyanates as CO Surrogates

Jin Ho Choi, Hak Do Kim, Ju Young Kang, Taejoo Jeong, Prithwish Ghosh, In Su Kim

Pages: 542-547 | First Published: 25 January 2021



The C—H/N—H carbonylative cyclization of 2-aryl quinazolinones using aryl isocyanates as CO sources under ruthenium(II) catalysis is described.

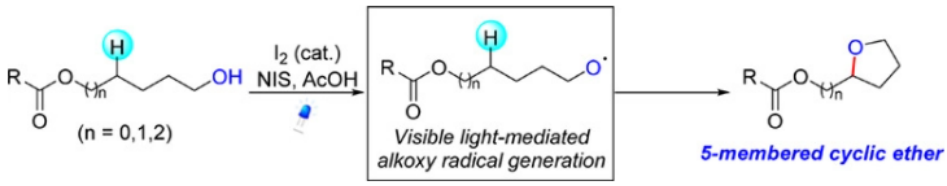
동학 불코(Bull. Korean Chem. Soc.) 캠페인

BKCS Special Issue on "Chemical Synthesis & Reaction Development"

Visible Light-Induced Intramolecular C—O Bond Formation via 1,5-Hydrogen Atom Transfer Strategy

Kiho Kim, Namhoon Kim, Sungwoo Hong

Pages: 548-552 | First Published: 31 January 2021

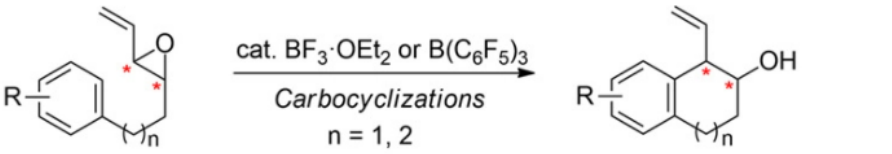


A visible-light-induced intramolecular C—O bond formation has been achieved by an alkoxy radical generated from an *in situ* formed O—I bond in the absence of an external photocatalyst. This practical synthetic method provides straightforward access to valuable five-membered cyclic ether scaffolds in a controllable and selective manner.

Stereoselective Carbocyclization of Vinyloxiranes Catalyzed by Lewis Acids: Construction of the Musellarin Tricyclic Core

Sehui Yang, Euijin Park, Jimin Kim

Pages: 667-670 | First Published: 02 February 2021

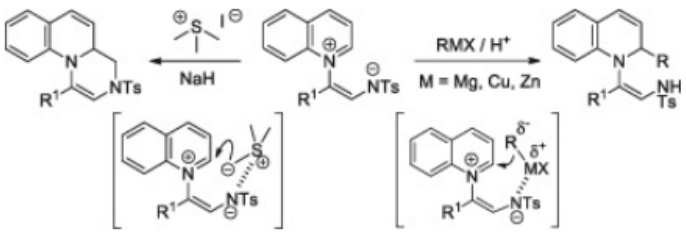


A Lewis acid catalyzed cyclization from *cis*- or *trans* vinyl epoxides was developed to produce the allyl alcohol adduct as a single diastereomer. Use of $B(C_6F_5)_3$ as a catalyst turned out to be key for the stereoselective carbocyclization in the case of *cis* epoxides and seven-membered ring system. The synthetic utility of the method was demonstrated in the construction of tricyclic core in musellarin A and E with requisite stereochemistry from the *cis*- and *trans* homoallyl alcohols.

Chelation-driven Regioselective 1,2-Dearomatizations of N-Aromatic Zwitterions

Donguk Ko, Jiyoung Kim, Jiyoun Lee, Eun Jeong Yoo

Pages: 671-674 | First Published: 10 February 2021



Regioselective 1,2-dearomatizations of N-aromatic zwitterions and organometallic nucleophiles have been achieved by the chelation strategy leading to the proximity of substrates. It has also been observed that sulfonium ylide, which could strongly coordinate with nitrogen anions, was applicable as a nucleophile, leading to [5 + 1] cycloadditions.

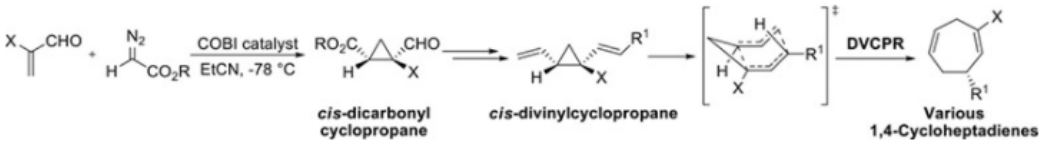
동학 불코(Bull. Korean Chem. Soc.) 캠페인

BKCS Special Issue on "Chemical Synthesis & Reaction Development"

Asymmetric Synthesis of (−)-Dictyopterene C' and its Derivatives via Catalytic Enantioselective Cyclopropanation

Taehyeong Kim, Jae Yeon Kim, Kyung Yee Park, Do Hyun Ryu

Pages: 675-678 | First Published: 18 February 2021

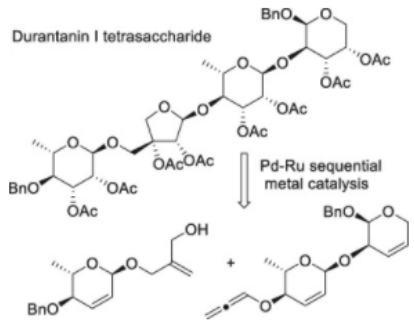


Chiral oxazaborolidinium ion-catalyzed enantioselective cyclopropanation was developed for the synthesis of optically active *cis*-dicarbonyl cyclopropanes. The chiral *cis*-cyclopropane was successfully applied to a convenient synthetic route to chiral 1,4-cycloheptadiene derivatives including (−)-dictyopterene C'.

A Convergent Synthesis of the Tetrasaccharide Fragment of the Purported Structure of Durantanin I

Keehwan Lee, Mijin Kim, Young Ho Rhee

Pages: 679-682 | First Published: 26 March 2021

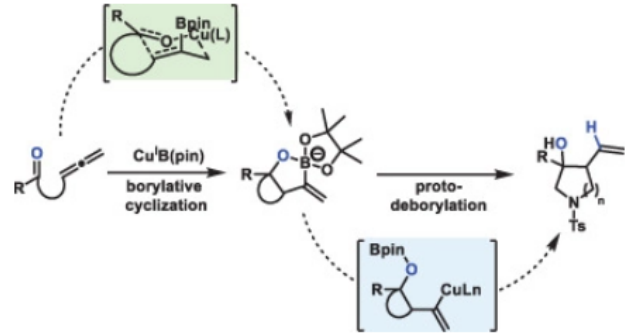


By using a sequential asymmetric metal catalysis, tetrasaccharide unit of durantanin I was synthesized. Notably, the convergent strategy rapidly assembles alkoxyallene and alcohol fragments to construct the apiofuranose ring. In addition, the flexibility of the synthesis is addressed by the preparation of a diastereomeric analog with the comparable efficiency to that of the naturally occurring structure.

Diastereoselective Reductive Cyclization of Allene-Tethered Ketoamines via Copper-Catalyzed Cascade Carboboronation and Protodeborylation

Muhammad Awais Ashraf, Shrikant D. Tambe, Eun Jin Cho

Pages: 683-690 | First Published: 08 February 2021



A copper-catalyzed cascade process has been developed for the synthesis of 3-hydroxypyrrolidine or 4-hydroxypiperidine derivatives in a highly diastereoselective manner.

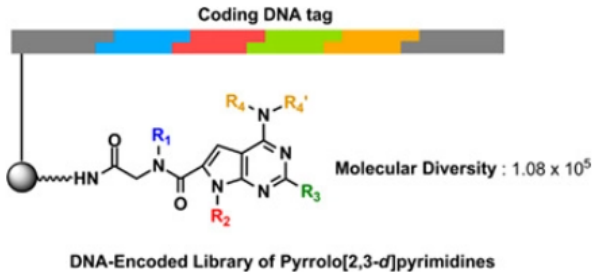
동학 불코(Bull. Korean Chem. Soc.) 캠페인

BKCS Special Issue on "Chemical Synthesis & Reaction Development"

Synthesis of a DNA-Encoded Library of Pyrrolo[2,3-*d*]pyrimidines

Jun Hyung Park, Hee Myeong Wang, Min Hyeon Shin, Hyun-Suk Lim

Pages: 691-698 | First Published: 08 February 2021

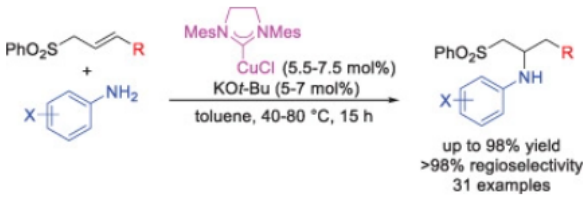


Solid-phase synthetic method for a DNA-encoded combinatorial library of tetra-substituted pyrrolo[2,3-*d*]pyrimidines (molecular diversity: 1.08×10^5) is described. This synthetic strategy was highly efficient and compatible with DNA, producing the desired pyrrolopyrimidines in excellent yields (70–92%) without DNA damage.

Copper-catalyzed Regioselective Hydroaminations of Allylic Sulfones With Aromatic Amines

Kundo Kim, Soohong Cho, Subin Park, Yunmi Lee

Pages: 699-708 | First Published: 11 March 2021

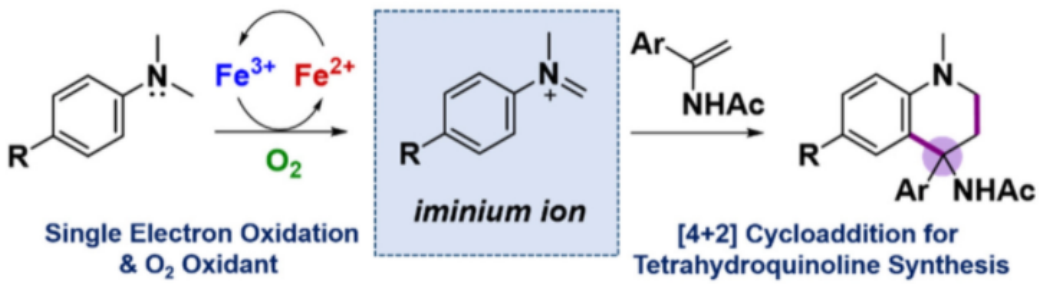


Copper-catalyzed hydroaminations of *β*, *γ*-unsaturated sulfones with aromatic amines promoted by an *N*-heterocyclic carbene ligand is described. A broad range of β-substituted β-amino sulfones was synthesized in good-to-excellent yields with complete regioselectivity.

Fe(III)-catalyzed Oxidative Povarov Reaction with Molecular Oxygen Oxidant

Du Yong Park, Joon Young Hwang, Eun Joo Kang

Pages: 798-801 | First Published: 05 April 2021



Oxidative Povarov reaction conducted under Fe(III)-phenanthroline catalysis. Oxidation step for iminium ion generation involved with nonirradiative single electron transfer between Fe(III) complex and dimethylaniline, and molecular oxygen participated as a terminal oxidant for regeneration of Fe(III) catalyst. Aryl iminium intermediate was reacted with electron-rich enamide to afford the *N*-heterocycle, tetrahydroquinoline.

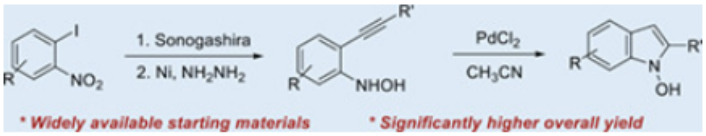
동학 불코(Bull. Korean Chem. Soc.) 캠페인

BKCS Special Issue on “Chemical Synthesis & Reaction Development”

Synthesis of *N*-Hydroxyindole Derivatives via Pd-Catalyzed Electrophilic Cyclization

Soo Min Oh, Seunghoon Shin

Pages: 925-928 | First Published: 12 May 2021

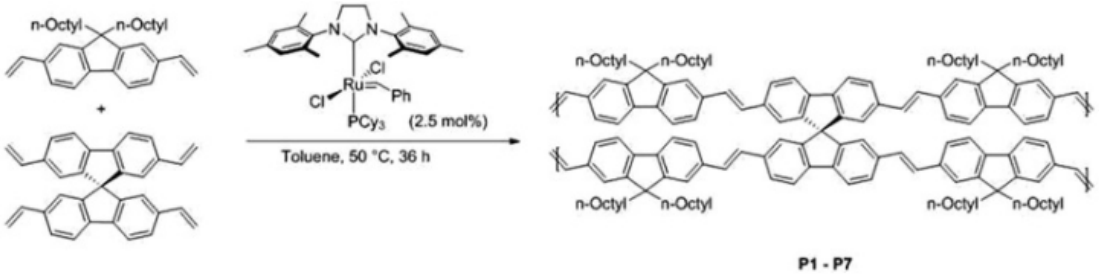


A synthetic protocol for the synthesis of C2-substituted *N*-hydroxyindoles has been developed which consists of Sonogashira coupling, partial reduction of the nitro group, and Larock cyclization. This protocol features superior generality and efficiency over conventional alternatives.

Synthesis of Conjugated Copolymer Containing Spirobifluorene Skeleton by Acyclic Diene Metathesis Polymerization for Polymer Light-Emitting Diode Applications

Seongwook Park, Soyeong Jeong, Changmuk Kang, Sukwon Hong

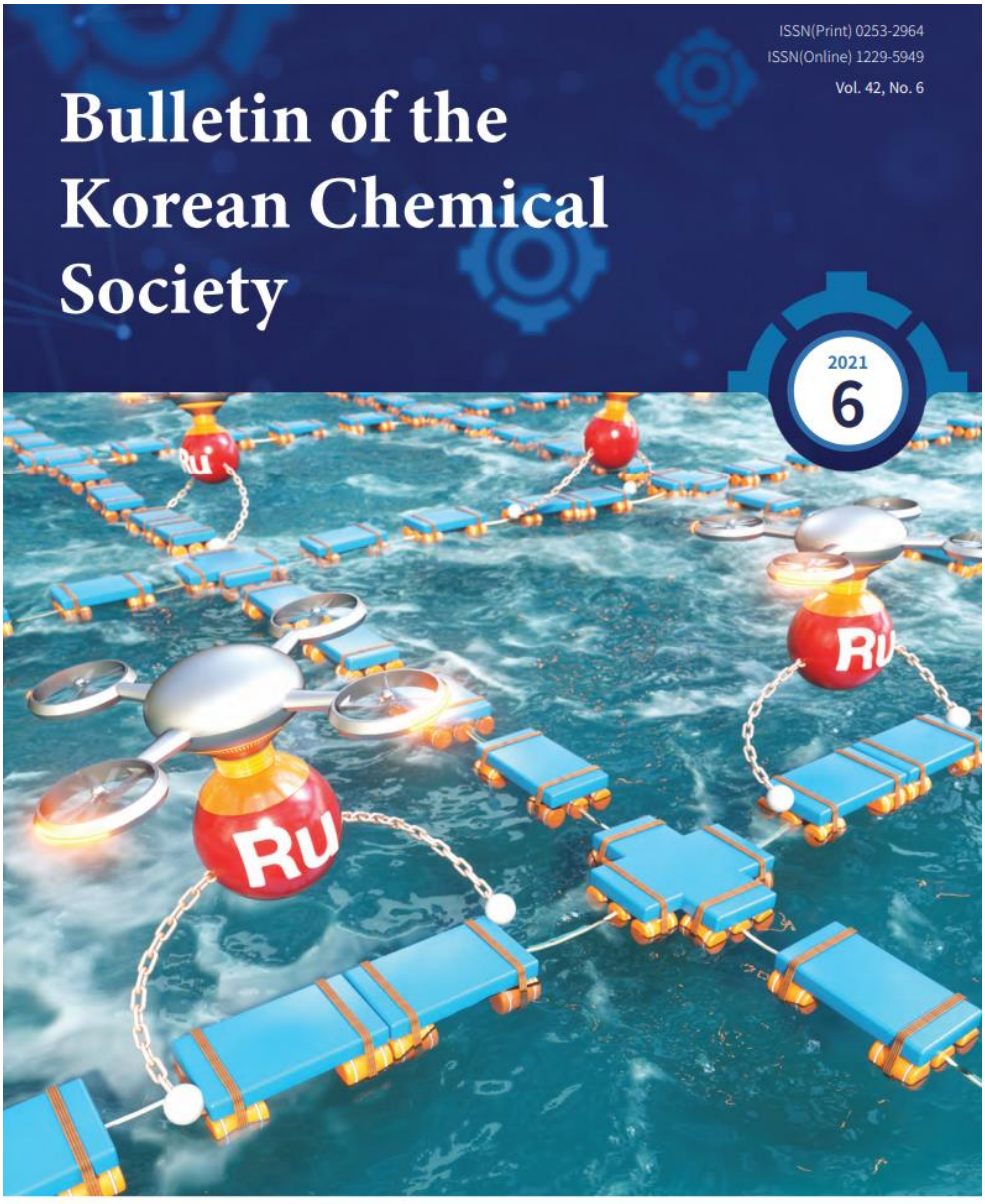
Pages: 929-933 | First Published: 29 April 2021



We report the activity of various types of ruthenium catalysts for acyclic diene metathesis (ADMET) polymerization. Additionally, we describe the synthesis of copolymers by ADMET copolymerization with divinylfluorene and tetravinylspirobifluorene. Polymers were analyzed for their physical and optical properties, and polymer light-emitting diode devices were fabricated. We were pleased to find that the more the spirobifluorene blocks were included, the better was the performance of the device.

동학 불코(Bull. Korean Chem. Soc.) 캠페인

BKCS Special Issue on “Chemical Synthesis & Reaction Development”



유기화학분과 소식지 퀴즈 /커피쿠폰 행사

2021년 유기화학 분과 소식지는 격월로 발행되어 분과 회원님들에게 유용한 정보를 제공하고자 노력하고 있습니다.

격월로 발간 되는 소식지의 열독을 권하고자 소식지 내용을 바탕으로 아래와 같이 퀴즈를 진행하고자 합니다.

해당 정답을 총무 부회장에게 7월 31일까지 이메일 (sunwoo@chonnam.ac.kr) 로 보내주시면 정답자 5명을 추첨하거나 선착순으로 선별하여 커피쿠폰을 발송해 드리겠습니다.

지속적으로 응모해주시는 회원님들께는 연말에 별도의 상품을 제공할 예정이므로 회원님들의 많은 참여 부탁 드립니다.

퀴즈 1) 2021년 제21회 유기화학분과 하계 워크샵에서 젊은유기화학자 수상 강연을 제외하고 총 몇 명이 주제 발표하였는지요?

1) 30명 2) 36명 3) 41명 4) 49명 5) 99 명

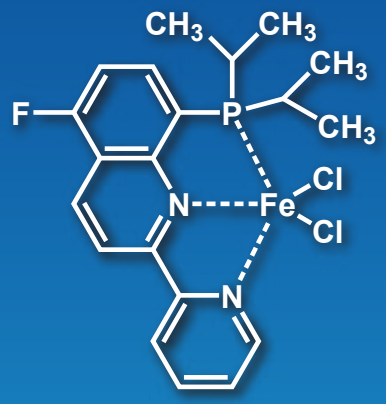
퀴즈 2) 7월 유기화학분과 소식지에 신입회원 및 국내 연구 동향에서 연구실이 소개되고 있습니다. 아래 예시 중에서 해당 연구 기관이 아닌 곳은?

1) 강원대 2) 국민대 3) 성균관대 4) 부산대 5) 해운대

퀴즈 3) GIST 홍석원 교수님의 연구 내용이 BKCS 6월호 표지에 선정되었습니다. 해당 연구에서 사용한 금속 촉매는 무엇입니까?

1) Pd 2) Ir 3) Ru 4) Fe 5) Ni

Iron Complex Catalyst for C-H Borylation



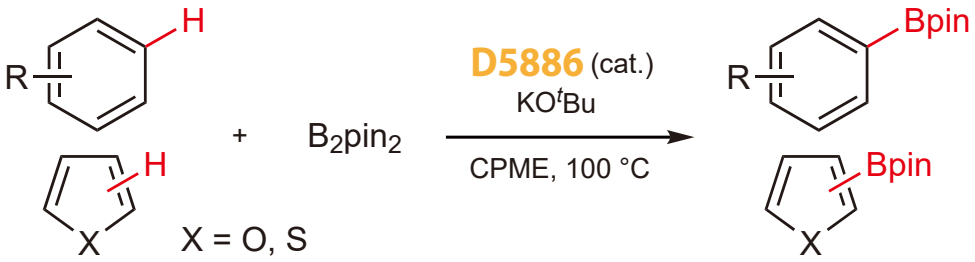
[D5886]

Advantages

- Air-stable solid
- Allows bolyation by C-H bond activation of (hetero)arenes in the presence of a base

Applications

C(sp^2)-H Borylation



Reference M. Kamitani, H. Kusaka, H. Yuge, *Chem. Lett.* **2019**, *48*, 898. DOI: https://doi.org/10.1246/cl.190345

Dichloro[8-(diisopropylphosphino)-5-fluoro-2-(2-pyridinyl)quinoline]iron(II)
100mg [D5886]

Related Products

Bis(pinacolato)diboron (= B_2pin_2)	1g / 5g / 25g / 100g [B1964]
Potassium *tert*-Butoxide (= KO^tBu)	25g / 100g / 500g [P1008]
Cyclopentyl Methyl Ether (= CPME)	100mL / 500mL [M1698]

For further information please refer to our website at www.TCIchemicals.com. ▶▶▶ C-H activation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미래의 차이다

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도레이첨단소재가 이루어드리겠습니다

소재, 그 무한한 가능성

'TORAY' 도레이첨단소재

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