

Kode>Nama Rumpun Ilmu: 112/Kimia
Tema: Material Maju, Energi Baru dan
Terbarukan

PROPOSAL

PENELITIAN STRATEGIS NASIONAL

Institusi



**Modifikasi Ekstrak Gambir Sebagai Material
Scaling Inhibitor CaSO₄ Untuk Instalasi Pipa
Pembangkit Listrik Tenaga Panas Bumi (PLTP)**

(Usulan Tahun ke-1 dari rencana 3 tahun)

TIM PENGUSUL

Prof. Suharso, Ph.D. NIDN 0030056903 (Ketua)
Dr. Drs. Tugiyono, M.Si. NIDN 0019116402 (Anggota)

Universitas Lampung
Juni, 2017

HALAMAN PENGESAHAN
PENELITIAN STRATEGIS NASIONAL INSTITUSI

Judul Penelitian : Modifikasi Ekstrak Gambir Sebagai Material Scaling Inhibitor CaSO₄ Untuk Instalasi Pipa Pembangkit Listrik Tenaga Panas Bumi (PLTP)

Jenis Usulan : Institusi

Bidang Fokus : Material Maju

Kode>Nama Rumpun Ilmu : 112/Kimia

Tema Isu Strategis Nasional : Energi baru dan terbarukan (New and renewable energy)

Ketua Peneliti

a. Nama Lengkap : SUHARSO S.Si, Ph.D

b. NIDN : 0030056903

c. Jabatan Fungsional : Guru Besar

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f. Perguruan Tinggi : Universitas Lampung

Anggota Peneliti (1)

a. Nama Lengkap : Dr. Drs TUGIYONO M.Si

b. NIDN : 0019116402

c. Perguruan Tinggi : Universitas Lampung

Institusi Mitra :

a. Nama Institusi Mitra : PT. ECOLAB INTERNASIONAL INDONESIA

b. Alamat : Pondok Indah Office Tower 3 6th Floor Suite 603, Jl. Sultan Iskandar Muda Kav. V-TA Pondok Indah Jakarta-12310

c. Penanggung Jawab : Ir. Zarkoni, M.M.

Lama Penelitian Keseluruhan : 3 tahun

Usulan Penelitian Tahun ke- : 1

Biaya Penelitian Keseluruhan : Rp 1,123,847,000.00

Biaya Penelitian

- diusulkan ke DRPM : Rp 373,567,000.00

- dana internal PT : Rp 0.00

- dana institusi lain : Rp 0.00 /in kind tuliskan:

Biaya Luaran Tambahan : Rp 50,000,000.00

Kota Bandar Lampung, 05-06-2017



Ketua Peneliti
(SUHARSO S.Si, Ph.D)
NIP/NIK 196908301995121001

Menyetujui,
Ketua LPPM Unila
(Warsono, Ph.D.)
NIP/NHK 196302161987031003

URAIAN UMUM

1. Judul Penelitian : Modifikasi Ekstrak Gambir Sebagai Material Scaling Inhibitor CaSO₄ Untuk Instalasi Pipa Pembangkit Listrik Tenaga Panas Bumi (PLTP)

2. Tim Peneliti

| No | Nama | Jabatan | Bidang Keahlian | Instansi Asal | Alokasi Waktu (jam/minggu) |
|----|--------------------------|------------------|---|---------------------|----------------------------|
| 1 | SUHARSO S.Si, Ph.D | Ketua Pengusul | - Kimia Anorganik, Crystal Growth | Universitas Lampung | 20.00 |
| 2 | Dr. Drs TUGIYONO M.Si | Anggota Pengusul | - | Universitas Lampung | 10.00 |

3. Objek Penelitian (jenis material yang akan diteliti dan segi penelitian):

Memanfaatkan gambir dan kemenyan sebagai green inhibitor kerak kalsium sulfat

4. Masa Pelaksanaan

Mulai tahun: 2018

Berakhir tahun: 2020

5. Usulan Biaya DRPM Ditjen Penguatan Risbang

- Tahun ke-1: Rp373,567,000

- Tahun ke-2: Rp374,780,000

- Tahun ke-3: Rp375,500,000

6. Lokasi Penelitian (lab/studio/lapangan)

Laboratorium Kimia Anorganik dan Organik Universitas Lampung, serta PLTP Ulu Belu Lampung

7. Instansi lain yang terlibat (jika ada, dan uraikan apa kontribusinya)

PT. Ecolab Internasional Indonesia

8. Temuan yang ditargetkan (penjelasan gejala atau kaidah, metode, teori, atau antisipasi yang dikontribusikan pada bidang ilmu)

Formulasi Inhibitor yang efektif dalam menghambat pembentukan kerak kalsium sulfat

9. Kontribusi mendasar pada suatu bidang ilmu (uraikan tidak lebih dari 50 kata, tekankan pada gagasan fundamental dan orisinal yang mendukung pengembangan iptek)

Pengembangan material maju dari bahan alam untuk green scaling inhibitor yang ekonomis, efektif, dan ramah lingkungan.

10. Jurnal ilmiah yang menjadi sasaran (tuliskan nama terbitan berkala ilmiah internasional bereputasi, nasional terakreditasi, atau nasional tidak terakreditasi dan tahun rencana publikasi)

Desalination-Elsevier, Journal of Water Process Engineering-Elsevier, dan Desalination and Water Treatment-Taylor and Francis

11. Rencana luaran HKI, buku, purwarupa atau luaran lainnya yang ditargetkan, tahun rencana perolehan atau penyelesaiannya

- Publikasi Ilmiah Jurnal Internasional, tahun ke-1 Target: accepted/published

- Publikasi Ilmiah Jurnal Nasional Terakreditasi, tahun ke-1 Target: belum/tidak ada

- Pemakalah dalam pertemuan ilmiah Nasional, tahun ke-1 Target: sudah dilaksanakan

- Pemakalah dalam pertemuan ilmiah Internasional, tahun ke-1 Target: sudah dilaksanakan

- Keynote Speaker dalam pertemuan ilmiah Internasional, tahun ke-1 Target: sudah dilaksanakan

- Keynote Speaker dalam pertemuan ilmiah Nasional, tahun ke-1 Target: belum/tidak ada

- Visiting Lecturer Internasional, tahun ke-1 Target: belum/tidak ada

- Paten, tahun ke-1 Target: terdaftar

- Teknologi Tepat Guna, tahun ke-1 Target: draft

- Buku Ajar (ISBN), tahun ke-1 Target: draft

- Tingkat Kesiapan Teknologi (TKT), tahun ke-1 Target: Skala 6

- Publikasi Ilmiah Jurnal Nasional Tidak Terakreditasi, tahun ke-1 Target: belum/tidak ada

- Pemakalah dalam pertemuan ilmiah Lokal, tahun ke-1 Target: belum/tidak ada

- Keynote Speaker dalam pertemuan ilmiah Lokal, tahun ke-1 Target: belum/tidak ada

- Model, tahun ke-1 Target: belum/tidak ada

- Purwarupa/Prototipe, tahun ke-1 Target: draft

- Bahan Ajar, tahun ke-1 Target: belum/tidak ada

- Tesis, tahun ke-1 Target: draft

- Disertasi, tahun ke-1 Target: belum/tidak ada

- Keikutsertaan dalam Seminar Internasional, tahun ke-1 Target: sudah dilaksanakan

- Keikutsertaan dalam seminar Nasional, tahun ke-1 Target: sudah dilaksanakan

REFERENSI

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LAMPIRAN. SURAT PERNYATAAN KETUA PENGUSUL



KEMENTERIAN RISET, TEKNOLOGI, DAN PENDIDIKAN TINGGI
UNIVERSITAS LAMPUNG
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GEDUNG REKTORAT LANTAI 5

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 Telp: +62 721 705173, Fax: +62 721 773798, E-mail: lppm@kpa.unila.ac.id

SURAT PERNYATAAN KETUA PENGUSUL

Yang bertanda tangan dibawah ini :

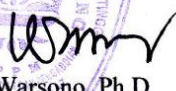
Nama : Prof. Suharso, Ph.D.
 N I D N : 0030056903
 Pangkat/Golongan : Pembina Utama Muda/IVc
 Alamat : Jurusan Kimia FMIPA Universitas Lampung
 Jl. Sumantri Brojonegoro No. 1 Gedung Meneng, Bandar Lampung,
 35145.

Dengan ini menyatakan bahwa proposal penelitian saya berjudul ” **Modifikasi Ekstrak Gambir Sebagai Material *Scaling Inhibitor* CaSO₄ Untuk Instalasi Pipa Pembangkit Listrik Tenaga Panas Bumi (PLTP)**” yang diusulkan untuk memperoleh dana **Penelitian Strategis Nasional** tahun anggaran 2018-2020, **bersifat original dan belum pernah dibiayai oleh lembaga/sumber dana lain.**

Bilamana di kemudian hari ditemukan ketidak sesuaian dengan pernyataan ini, maka saya bersedia dituntut dan diproses sesuai dengan ketentuan yang berlaku dan mengembalikan seluruh biaya penelitian yang sudah diterima ke kas negara.

Demikian pernyataan ini dibuat dengan sesungguhnya dan dengan sebenar-benarnya.

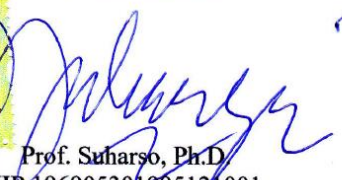
Mengetahui,
Ketua LPPM Unila



Warsono, Ph.D.
NIP 196302161987031003 #

Bandar Lampung, 5 Juni 2017
Yang menyatakan,




Prof. Suharso, Ph.D.
NIP 196905301995121001